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The Structure of Popular Beliefs about Alcoholism

By Alan M. Marcus

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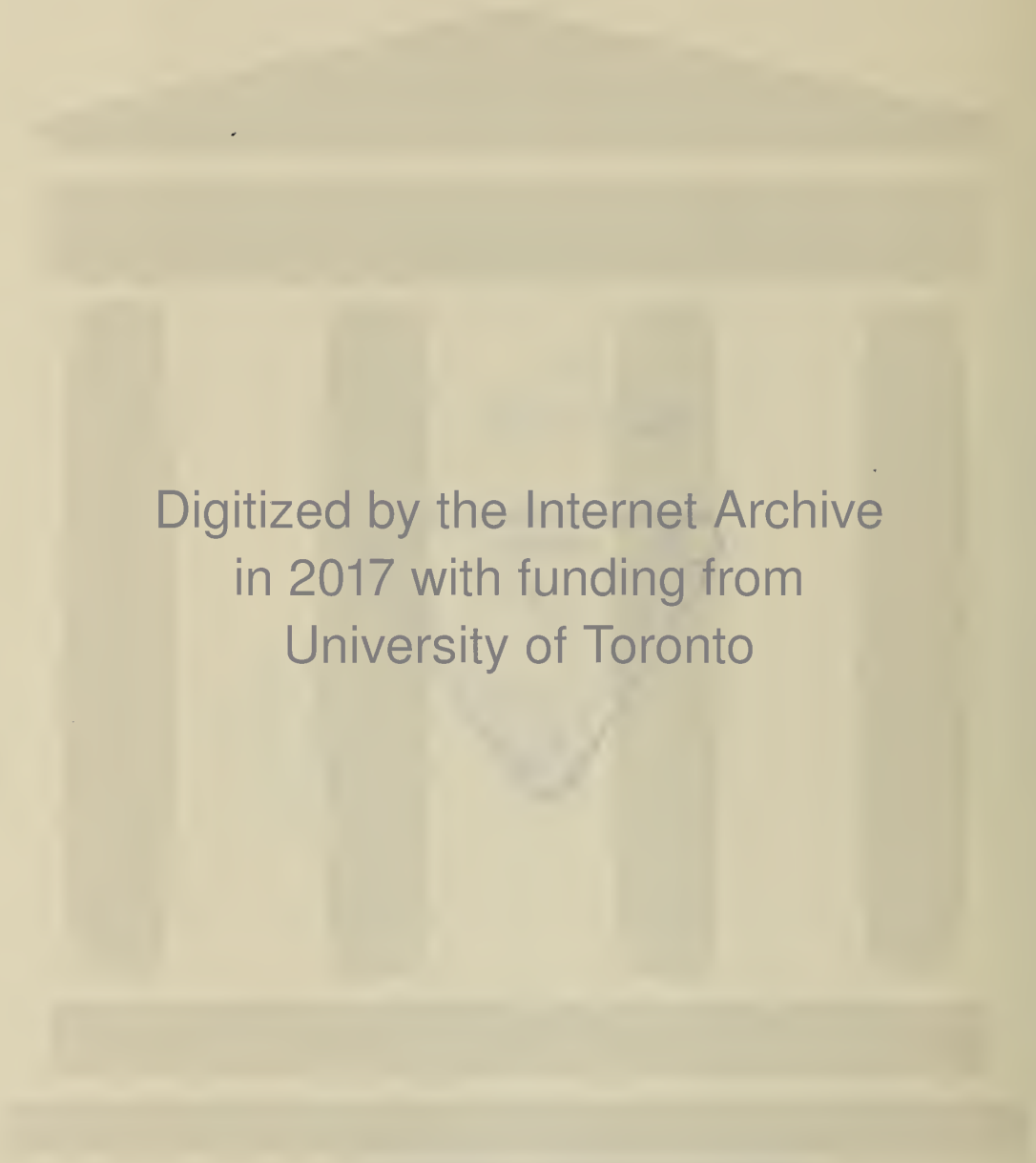
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THE STRUCTURE OF POPULAR BELIEFS ABOUT ALCOHOLISM

In recent years there has been an increasing awareness that public education about various medical and social problems has been hampered by a lack of understanding of popular opinion on these problems. This gap in our knowledge has become particularly acute in mental health education and has led to some critical evaluations (Joint Commission on Mental Illness and Health, 1961; Pennsylvania Mental Health, 1960) and important research (e.g., Gurin, Veroff, & Feld, 1960; Nunnally, 1961) in that field. This heightened interest in a more objective approach to popular education has spilled over into several other areas as well -- among them old age (e.g., Kogan, 1961), blindness (Cowen, Underberg, & Verrillo, 1958), and physical disabilities (e.g., Yaker, Block, & Campbell, 1960). This concern with understanding and measuring opinions about various disorders has, however, as yet resulted in no important research on opinions about alcoholism.

The most significant aspect of this movement is the growing recognition that the general public plays a critical role in the control of many disorders. The recognition of problem cases and the subsequent intervention in them is in large measure carried out by lay people (cf., Mechanic, 1962; Kitsuse, 1962). This is probably more true of alcoholism than of almost any other medical-social problem. Since alcoholism is not a highly "visible" phenomenon (Lemert, 1951), it is the public (friends, relatives, and associates) that must usually identify the alcoholic and bring pressure on him to seek treatment. Moreover, the public has an important part to play in supporting voluntary associations concerned with alcoholism and stimulating action from professional groups and government agencies (cf., Jellinek, 1960, p. 182). Hence, public understanding of alcoholism is essential for the effective management of this problem.

Previous investigations of opinions about alcoholism have been limited to a small number of opinion polls and surveys. While the polls have been of some empirical interest, they have provided relatively restricted information on a small number of isolated opinions. Furthermore, they seem to have been predicated on the notion that responses to specific items (such as "alcoholism is an illness" or "alcoholism is inherited") can be used as reliable indices of attitudes toward, and knowledge of, alcoholism. Since different opinion items which are ostensibly measuring the same belief have been found to produce markedly different responses (Marcus, 1962), such inferences are rendered highly suspect.

The results of two unpublished interview surveys (Maucus, 1961; Star, no date) have shown clearly that a more comprehensive method for measuring opinions about alcoholism is needed. These studies indicated that conceptions about alcoholism and the alcoholic varied considerably among the general public; and that there was no general agreement on the meaning of such concepts as "disease", "craving", or "weakness" with

reference to alcoholism. These findings made it quite clear that a more systematic treatment would be needed to obtain an adequate description of opinions about alcoholism.

The investigation reported here represents an initial attempt to identify and measure the salient dimensions underlying opinions about alcoholism among the general public. As such, it was conceived of as an exploratory study the findings of which are not conclusive but only suggestive. Further investigation is necessary to establish that the dimensions isolated here are stable and clearly defined.

METHOD

The Initial Selection of Items. The first step in the development of the questionnaire was the collection of a comprehensive set of statements about alcoholism. These statements were obtained from interview protocols (Marcus, 1961), from the alcoholism literature, from Temperance propaganda (Weisler and Marcus, 1962), and from various questionnaires and opinion polls on alcoholism (cf., Marcus, 1962). The original pool of items from which the final selection was made numbered close to 1000 statements.

In reducing this large number of statements to a more manageable size, several criteria for inclusion and exclusion of items were adopted. Items were discarded from the original collection for the following reasons: (1) If the statement was considered a duplicate of another item or, in some cases, considered to be subsumed under another item; (2) If a statement was worded in technical language with which a layman was unlikely to be familiar and could not be reworded appropriately; (3) If either pretesting, the survey data (Marcus, 1961), or other information indicated that most people would either completely agree or completely disagree with the item.

Considerable dependence was placed on the earlier interview survey in deciding which items should be included in the final questionnaire. This survey had shown that the general public held widely varying opinions about several aspects of alcoholism, including: the seriousness of alcoholism, causes of alcoholism, symptoms, treatment, prognosis for recovery, social consequences of alcoholism, the disease conception and various characteristics of the alcoholic. Where possible, items representing each of these categories were included. A second criterion for inclusion was that, if there were at least three or four measures of a given belief in the initial collection, at least one of these items would be included in the final questionnaire. Thirdly, several items which had been used repeatedly in public opinion polls and structured questionnaires about alcoholism were retained. As well, some items which occurred frequently in alcoholism propaganda were included and finally, a few items which seemed to measure ideas of interest not covered by the above criteria made up the remainder of the questionnaire.

This refining process resulted in a questionnaire containing 100

items. Several of the items were administered in pretests to small groups and many as a result were revised. The final 100-item questionnaire was then administered to 254 students at Ryerson Institute of Technology and, the item distributions being satisfactory, no further revisions were made.

The Questionnaire Format. The items were worded as simple declarative statements in the questionnaire. Each was accompanied by a seven-point "agree-disagree" scale, as in the following example:

	Disagree						Agree
	1	2	3	4	5	6	7
Most alcoholics do not live on Skid Row.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The "box" construction was adopted from Nunnally (1961) who had pretested several forms and found that this minimized response error. Nunnally's (1961) procedure for dealing with response set tendencies was also used. It has been found that some people tend to agree or disagree with questionnaire items regardless of the content of the items (Couch & Keniston, 1960; Peabody, 1961). To account for this tendency, a random sample of one-half of the items were reworded so that their meaning was opposite to that expressed in the original statement. For example, "Alcoholism is a disease" was changed to "Alcoholism is not a disease". This procedure was expected to minimize the contribution that an agreeing response set would make to the correlations among the items.

The complete 100-item questionnaire, as it was presented to the respondents, is reproduced in Appendix A.

→ The Toronto Sample. The alcoholism questionnaire was administered to a quota sample of 200 adults from the Toronto area. The responses of this group were used as the raw data for the factor analysis.

→ Since the data from this sample were to be used specifically for the factor analysis, it was not essential to obtain a precisely representative cross-section of the Toronto population. However, it was important to select a group who varied considerably in age, education, social class, and other demographic characteristics. For these reasons, a quota sampling technique was chosen as the most appropriate. This procedure simply required that the interviewer administer the questionnaire to a variety of people from different age groups, occupation groups, and so on, within a given area of the city. In the present study, it was also stipulated that equal numbers of men and women were to be interviewed, that all respondents must be at least 20 years of age, and that no interviews were to be conducted with friends or relatives of the interviewer.

The administration of the questionnaire was carried out by Canadian Facts Ltd., a marketing and public opinion research organization. The interviewers were all housewives and each was required to obtain

TABLE 1
DEMOGRAPHIC CHARACTERISTICS OF THE TORONTO SAMPLE (N=200) *

Characteristic	Frequency	Characteristic	Frequency
<u>Age</u>		<u>Education</u>	
20 - 24	21	Some public school	7
25 - 29	21	Graduated public school	17
30 - 34	30	Some high school	63
35 - 39	32	Graduated high school	
40 - 44	23	&/or technical school	82
45 - 49	28	Some University	13
50 - 54	14	Graduated University	18
55 - 59	6		
60 - 64	16		
65 and over	8		
<u>Sex</u>		<u>Marital Status</u>	
Male	100	Married	157
Female	100	Single	30
		Widowed/Divorced	10

* The frequencies for "age" and "marital status" do not total 200 because a few respondents failed to supply this information

either ten or twenty completed questionnaires. The instructions given to the interviewers are presented in Appendix B. (It should be noted that one advantage of this form of questionnaire is that it is not necessary for the interviewer to stay with the respondent throughout the administration. As pointed out in the instructions, the interviewer needed to stay with the respondent only until the latter was well started on the questionnaire. She could then select another respondent and return to the first one later to pick up the completed form. This procedure considerably reduced the cost of this part of the operation.)

The interviewers reported that they experienced no difficulties (other than those normally occurring with home interviews) in the administration of the questionnaire. So far as could be determined, there were no refusals on the grounds of subject matter.

Some of the characteristics of the Toronto sample are described in Table 1. It is apparent from these data that the sample included a fairly good representation of people within each of the demographic categories noted. A rough measure of socio-economic class was also obtained and it corresponded closely with estimates for the Toronto area.

RESULTS

The Frequency Distributions. The responses of the Toronto sample to the alcoholism questionnaire are included in Appendix A. These data indicate that there was considerable variability in the responses to most of the items. Every item had responses in all seven categories, although there were 14 items which were scored in the "completely agree" or completely disagree" categories by more than 50% of the respondents. The standard deviations of the items (see Appendix C) also show that there were few items on which the respondents were in general accord. Since the number of items with low variability was quite small, and since it was unlikely that they would have a marked effect on the factor structure, these items were not excluded from the factor analysis.

The Correlation Matrix. Pearson product-moment correlation coefficients were calculated from the Toronto sample data for the 100-item questionnaire. This 100 X 100 correlation matrix (not shown here) revealed that the correlation was .53 and there were only 75 correlations that equalled or exceeded .30. Some items showed virtually no significant correlations with the other items. Although an average correlation was not computed, a rough analysis indicated that the mean correlation could be estimated as close to .10.

The Factor Analysis. The correlation matrix was first factor analyzed by the principal-factor method, using the squared multiple correlation of each item with the remaining items as the estimate of the communalities. Sixteen factors were extracted in accordance with Kaiser's recommendation (cf., Harman, 1960, p. 363) that the number of common

TABLE 2
 PERCENTAGE OF EXTRACTED AND OF TOTAL VARIANCE
 REFERABLE TO EACH OF THE ROTATED FACTORS

Factor	Percentage of the extracted variance	Percentage of the total variance
6	12.8	4.6
1	8.2	2.9
2	8.0	2.8
16	7.9	2.8
5	7.0	2.5
3	6.3	2.3
12	6.2	2.2
14	6.1	2.2
4	6.0	2.1
7	5.1	1.8
15	4.6	1.6
11	4.5	1.6
13	4.5	1.6
10	4.4	1.6
9	4.3	1.5
8	4.0	1.4
Total	100.0*	35.6*

* The totals are not exactly equal to the column sums because of rounding errors.

factors should be equal to the number of eigenvalues greater than one of the correlation matrix. (Kaiser's criterion applies specifically to the case in which unities are used in the diagonal, but it was felt that in a matrix of this size the values of the communalities would not have an appreciable effect on the size of the eigenvalues.) This solution was transformed to a simple structure type of solution by an orthogonal rotation of the 16 factors using Kaiser's normal varimax criterion (Kaiser, 1958). The complete rotated factor matrix is presented in Appendix D.

Not surprisingly, in view of the low correlations among the items, the factors produced by the analysis were not statistically strong. Table 2 gives the amount of both the extracted variance and the total variance accounted for by each of the 16 factors in the rotated solution. Column 1 shows the amount of common variance that is attributable to each particular factor. The second column shows how much of the total variance of the original correlation matrix is accounted for by each factor. The 16 factors accounted for less than 36% of the total matrix variance. Furthermore, there were few factor loadings which were as large as .40. Only four factors had as many as five items with loadings of .40 or greater and eight of the factors had no more than two items with such loadings. What was surprising, then, was that despite these limitations several meaningful factors were produced.

It should be mentioned that, in the development of the computer program, three other rotated solutions -- a 4, an 8, and a 12-factor solution -- were computed also. It would seem reasonable that the comparability of these solutions on a given factor would be a good index to the strength and stability of that factor. In the discussion of the factors, then, these relationships might be kept in mind.

Factor 6 and Factor 4 appeared in essentially the same form in all solutions, including the unrotated solution (that is, the same items had high loadings although the loading patterns may have differed). Factor 6 was also equivalent to the first factor extracted in the unrotated solution. Factors 1, 3, 5, and 7 appeared with only minor differences in both the 8-factor and 12-factor solutions. Factors 1 and 5 in particular were virtually identical to factors in both those solutions, and also showed a strong similarity to factors in the unrotated solution. Factor 7 (which we found difficult to interpret) appeared to be more meaningful in the 12-factor solution, and Factor 12 was also similar-but-different in that solution.

Factors 2, 14 and 16 all showed similarities to factors in the 12-factor solution, but the differences suggested quite different interpretations. Our assumption in these cases was that the 16-factor solution was preferable. In the case of factors 2 and 14, the 12-factor solution tended to "combine" two or more of the factors that appeared in the 16-factor solution. Factor 16 was the truly problematic one. It was a strong factor (see Table 2) and was quite similar to Factor 2 in the unrotated solution. However, both the unrotated solution and the 12-factor solution for this factor led to essentially different interpretations. The remaining factors in the 16-factor solution were not comparable to any factors in the other solutions.

In the descriptions below, the factors have been presented roughly in order of the confidence we have in them. This ordering is based only partly on the correspondence of the factors with factors in the other solutions. Other considerations were the number of items with high loadings on the factor, the correlations among the items defining the factor, the contribution of the factor to the common variance, and the clarity of the interpretation of the factor. This is an arbitrary criterion with no statistical validity, but it does serve as a rough guide in evaluating the significance of the factors.

Interpretation of factors. Since this was the first factor analytic study of opinions about alcoholism, there was no prior information by which the adequacy of the factor solution and its interpretation could be judged. Therefore, it is important to note that this exploratory study in itself does not provide a crucial test of the invariance of the isolated factors or of their psychological meaning. Whether the present solution is adequate and the interpretations plausible can be determined only by new factorial experiments using a different sample of items from the same domain of opinions.

The most important function of this study, then, is as a starting-point for more crucial subsequent studies. To that end, there has been no attempt to be extremely conservative in the interpretation of the factors. While some of the factors were clearly interpretable, the definition of others was much more speculative and in some cases based on relatively scant information. In every case, all possible hypotheses deriving from the data were explored. However four of the 16 factors were left without interpretation since they did not lend themselves to any reasonable definition.

The factors were defined mainly in terms of those variables which had loadings at least as large as .40. However, when a factor had few such loadings or when it was felt that items with weaker loadings would help to clarify the meaning of a factor, items that loaded less than .40 (particularly those with loadings between .30 and .40) were given consideration. Appendix E shows the items with the highest loadings on each of the 16 factors.

Social Status of the Alcoholic (Factor 6). This factor seems to be readily interpretable as a measure of the general conception that "alcoholics come from all walks of life". People with high scores on this factor tend to feel that alcoholics are seldom found in important positions in business (Item 41, .66); that alcoholics have less education than other people (Item 57, .56) and are usually unemployed (Item 72, .54); that very few respectable and productive citizens have been alcoholics (Item 33, .44); and that heavy drinkers from the lower class have the greatest chance of becoming alcoholics (Item 58, .53). These items all support the belief that the alcoholic comes from the lower socio-economic strata of his society.

The remaining items with high loadings (greater than .40) on

this factor concern the drinking behaviour of the alcoholic's family. People who assign the alcoholic a low socio-economic status tend to feel that most alcoholics were brought up in homes in which there was a lot of drinking (Item 95, .46) and that very few alcoholics had abstaining parents (Item 53, .55). The most consistent interpretation of these loadings would seem to be that high scorers generally associate heavy drinking with the lower class and, by inference, feel that an environment in which heavy drinking is rewarded is most conducive to alcoholism.

Although this factor clearly seems to be measuring beliefs about the social status of the alcoholic, it seems likely that it can be considered a general evaluative factor as well. Some of the items with moderate loadings indicate that, if one perceives the alcoholic as being from the lower class, one also tends to think of him as weak-willed (Item 94, .39; Item 75, .30), unkempt (Item 56, .38), and irresponsible (Item 98, .29). Hence, a conception of the alcoholic as a member of the lower class appears to be associated with a general negative evaluation. Since this interpretation is only suggestive, the factor has been labelled simply, "Social status of the alcoholic".

Emotional Difficulties as Causes of Alcoholism. (Factor 1). This factor clearly deals with psychological factors in alcohol addiction. People with a high score believe that alcoholics usually have severe emotional difficulties (Items 65, -.58), that they are more tense and nervous than other people (Item 39, -.47), and that they worry a lot about their everyday problems (Item 24, -.42). It follows reasonably that these psychological problems could have arisen from, or been aggravated by, stressful situations that occurred at various times in the life of the alcoholic. Thus, people who associate emotional difficulties with alcoholism also tend to accept that unhappy marriages and other unpleasant family situations often lead to alcoholism (Item 59, -.56); that an alcoholic's basic troubles were with him long before he had a problem with alcohol (Item 3, -.49); that an alcoholic usually has something in his past which is driving him to drink (Item 16, -.48); and that many cases of alcoholism can be traced to emotional experiences in childhood (Item 99, -.47). It seems clear, then, that this factor is measuring the belief that alcoholism can be caused by emotional difficulties. It is interesting, moreover, that this general belief appears to subsume the ideas that alcoholism is associated with various kinds of problem situations, with early experience, and possibly with personality characteristics.

This interpretation is supported by some of the items with low loadings on the factor. For example, high scorers tend to accept that most alcoholics are neurotic (Item 80, .29) and that most of the problems that alcoholics have are not the direct result of their excessive drinking (Item 76, .29). It seems quite clear that this factor is dealing with acceptance-rejection of a psychological explanation of alcoholism.

It should be noted that acceptance of emotional difficulties as causes of alcoholism is not necessarily associated with a sympathetic attitude toward the alcoholic. Some of the items with low loadings indi-

cate that people who support this point of view may also feel that the alcoholic has a "weak character" (Item 78, $-.30$) is "spineless" (Item 94, $-.28$) and that most alcoholics are either drunk or drinking every day (Item 83, $-.26$). Although these items are not inconsistent with the interpretation of the factor, they do not support the notion that a high score on the factor implies a positive evaluation of the alcoholic.

Alcoholism and Character Defect (Factor 5). The items which are most heavily represented in this factor are concerned mainly with the conception of the alcoholic as a weak-willed person. People with high scores feel that alcoholism is a sign of character weakness (item 78, $-.54$) and the the alcoholic is a person who is "morally weak" (Item 96, $.58$), "spineless" (Item 94, $-.45$), and lacking in will power (Item 70, $.41$). Since only one item (Item 81) which does not directly measure this belief has a high loading on the factor, it would seem that acceptance-rejection of the weakness conception is relatively independent of other beliefs about alcoholism.

Some of the other items do suggest possible correlates of this belief, but their low loadings make any inferences quite speculative. For example, people who consider the alcoholic to have a character defect also may feel that there is no excuse for anyone becoming addicted to alcohol (Item 38, $-.35$), that alcoholism is not caused by a chemical factor in the body (Item 85, $-.26$), and that most of the problems that alcoholics have are the direct result of their excessive drinking (Item 76, $-.25$). In other words the belief that the alcoholic has a character defect is one reason for rejecting other explanations for alcoholism.

Other items indicate that the weakness conception may have implications beyond that of an explanation for the cause of alcoholism. Those who accept that the alcoholic has a character defect also tend to feel that the alcoholic cares very little about himself and his family (Item 81, $.40$) and that he is unlikely to be a very "respectable" sort of person (Item 33, $-.23$; Item 56, $-.23$). These loadings suggest that acceptance of the weakness conception may be associated with a negative attitude toward the alcoholic.

The Alcoholic as a Steady Drinker (Factor 4). The items defining this factor are clearly involved with the issue of whether heavy drinking and periodic excessive drinking in particular are indicative of alcoholism. People with high scores on this factor feel that a heavy drinker is not an alcoholic if he is able to stop drinking for several weeks at a time (Item 42, $.57$) or if he drinks only on weekends (Item 89, $-.56$). As well, they believe that a person is not necessarily an alcoholic if he often drinks to the point of drunkenness (Item 63, $.54$) or frequently stays intoxicated for several days at a time (Item 8, $.36$). The first pair of items measure opinions about the relation of alcoholism to two different types of periodic drinking; the second pair measure opinions about the relation of alcoholism to two different degrees of excessive drinking. However, it seems likely that the last two items may also be relevant to periodic drinking since the use of the adverbs "often" and "frequently" may be taken to indicate that the drinking to which they

refer is of an intermittent variety. This interpretation is supported by the only other item which loads here at least as much as .30: Most alcoholics are either drunk or drinking every day (Item 83, .30). People who feel that periodic drinking is not indicative of alcoholism also tend to feel that the alcoholic is a steady drinker.

It is, of course, possible that this factor is concerned with the more fundamental question of the relation of excessive drinking to alcoholism. That is, people who reject the items may do so because they feel that excessive drinking - whatever forms it takes - is a sufficient indicator of alcoholism; whereas people who accept the items feel that excessive drinking is not an unequivocal sign of alcoholism. In this regard, it should be noted that those who reject periodic drinking as a sign of alcoholism also tend to reject other signs of alcoholism, particularly morning drinking (Item 71, .27), as symptomatic. This suggests that people with high scores on this factor tend to be unwilling to accept any definition of alcoholism in terms of drinking behaviour (other than possibly the most extreme kinds), and that the factor in general measures willingness to accept drinking behaviour as a criterion for alcoholism. However, this interpretation is only suggestive. The label we have chosen seems most descriptive of the items defining the factor.

One other item with a moderate loading deserves brief consideration. Those who reject periodic drinking as indicative of alcoholism tend to feel that alcoholics are usually more tense and nervous than other people (Item 39, .27). This suggests that people who do not discriminate alcoholics from non-alcoholics on the basis of their drinking behaviour may look for differences in terms of the alcoholic's reasons for drinking. The evidence, however, is too scanty to allow any development of this hypothesis here.

Prognosis for Recovery (Factor 3). Although the items loading on this factor are related to a variety of beliefs, it would seem that they have in common a reference to the likelihood that a person can recover from alcoholism. People with high scores on this factor feel that the alcoholic is seldom helped by any sort of medical or psychological treatment (Item 26, -.41); that most alcoholics could not be rehabilitated even if more help were available for them (Item 18, -.36); and that in recent years very little success has been met in treatment of the alcoholic (Item 67, -.32).

The other items with high loadings on this factor can be interpreted as providing support for the belief that the alcoholic can or cannot recover. People who give the alcoholic a poor prognosis feel that the alcoholic drinks excessively mainly because he enjoys drinking (Item 37, -.60) and that most alcoholics are completely unconcerned about their problem (Item 29, -.38). This suggests that these people tend to believe that alcoholism is deliberate and voluntary over-indulgence. It seems quite reasonable that a person would hold out little hope for the alcoholic if he felt that the latter was drinking out of choice rather than compulsion and/or was quite unconcerned about his drinking.

It seems likely that a belief in organic causes is also associated with pessimism about treatment. Those who receive high scores on this factor also tend to feel that there is a chemical factor in the body that causes some drinkers to become alcoholics (Item 85, -.39). This association is possibly explained by the fact that these same people tend to accept the notion that an alcoholic can be "too far gone" to recover (Item 45, .24). In other words, if you believe that alcoholism is an incurable organic disorder, you are likely to believe as well that the alcoholic will not respond to treatment!

Hence it would seem that the alcoholic can be given a poor prognosis either because one believes that he does not want to stop drinking or that he is not able to stop drinking. These two beliefs are apparently the most relevant for distinguishing those who are optimistic from those who are pessimistic about treatment for alcoholics.

Alcoholism is an Illness (Factor 12). There seems no doubt that this factor is measuring the belief that "alcoholism is an illness". It is also clear from the factor loadings that the factor is heavily represented in only one item*, Item 61, which states that "alcoholism is best described as an illness rather than a habit" (-.63). Those who accept Item 61 also tend to accept that alcoholism is a disease (Item 2, .36) and that alcoholism is a type of mental illness (Item 52, .28), but neither of these items has a strong loading on the factor. This suggests that the disease conception as it is understood by the general public may not be a primary factor in beliefs about alcoholism.

One possible explanation for this finding is that the concepts "illness" and "disease" have different referents (or that the same concept has different referents for different people). Neither Item 61 nor Item 2 clearly states the nature of the illness or disease to which it is referring, so it is conceivable that acceptance or rejection of the items could be based on different conceptions of the way in which alcoholism is an illness. For example, people may reject the notion that alcoholism is a disease because they associate "disease" with organic disorders and consider alcoholism to be some other kind of disorder. Or people may accept Item 61 because they reject the idea that alcoholism is a habit, rather than because they agree on the type of illness it represents. Certainly those who say that alcoholism is an illness are not all agreed that it is a "mental" illness (Item 52). It is suggested, then, that the kinds of statements about alcoholism that a person is willing to accept may be more dependent on his particular conception of the disease process than on a general acceptance of the notion that alcoholism is a disease. (This hypothesis is supported by the correlation matrix, which showed that both Item 61 and Item 2 had few high correlations with the other items.)

* Although Item 22 - The alcoholic deserves the same consideration as any other sick person - has a high loading on the factor (-.41), its extremely low variance minimizes its importance.

Apart from these considerations, there was still a tendency for some items not directly related to the disease conception to load on this factor. In particular, those who accepted that alcoholism is an illness were more likely to adopt a sympathetic attitude toward the alcoholic (Item 22, Item 23, .32) and were more likely to believe that the alcoholic's drinking was beyond his control (Item 21, .31; Item 86, .25). This grouping suggests that acceptance of the general illness conception may reflect the belief that there is an ego-alien quality to the disorder. Even if this inference is correct, though, the low loadings indicate that the relationship is not a strong one.

Loss of Control (Factor 2). The items with the highest loadings on this factor are primarily concerned with the question of whether the alcoholic can control his drinking. These "control" items are: the alcoholic is not helpless to control the amount of alcohol he drinks (Item 50, .49); most alcoholics could drink less if they wanted to (Item 17, .46); if he wanted to, an alcoholic could have one or two drinks and no more (Item 86, .40). This grouping clearly suggests that the factor might best be defined as a measure of acceptance of the "loss of control" concept.

The other items heavily represented in this factor indicate that its meaning may not be quite so limited. People who accept that alcoholism involves loss of control are more likely to believe that solitary drinking (Item 12, .49) and to a lesser extent, morning drinking (Item 71, .29) are signs of alcoholism. Furthermore, they feel that alcoholism usually does not come about very suddenly (Item 31, .44). These loadings suggest that the factor may be concerned more generally with symptom formation in the development of alcoholism.

At a more speculative level, it is possible that this factor is concerned with the conception of alcoholism as a progressive disorder. It seems plausible that people who think of alcoholism as a progressive disorder would be most likely to accept that there is a distinctive symptomatology, that loss of control is the most characteristic symptom and that the development of alcoholism is a relatively slow and orderly process. Although this seems to be a reasonable hypothesis, the evidence here can support alternative interpretations. For the time being, then, it has been decided to retain the label "loss of control" for the factor.


It is interesting to note that what we have called the "seriousness" items have moderate loadings on this factor. Those people who believe that alcoholism involves a loss of control over drinking also tend to believe that alcoholism is a serious problem (Item 79, .36; Item 44, -.28) and that the alcoholic causes a good deal of harm (Item 28, .31; Item 81, .29). Since these items are also related to two other factors, they will be discussed separately later in the paper.

Addiction Liability (Factor 16). Although the definition of this factor was by no means clearcut, it seemed to make most sense when interpreted as a measure of beliefs about the dangers of alcohol addiction. These dangers were expressed mainly in terms of the addiction potential of alcohol and the consequences of the addiction per se.

Two items in particular are concerned with the addiction potential of alcohol; Item 54, nobody who drinks is immune from alcoholism (.42); and Item 6, an alcoholic can get into as much trouble by drinking beer as by drinking liquor (.40). Both items appear to reflect the belief that alcohol is a highly addicting substance; i.e., that anyone exposed to alcohol is a potential alcoholic and that any amount of alcohol is potentially dangerous. If one agrees with these items, one also tends to feel that a person usually has very little warning before he becomes an alcoholic (Item 84, .42). Apparently then, people with high scores on this factor think that alcohol is a dangerous substance not only because of its high addiction potential but also because of the insidious development of the addiction.

The remaining items with high loadings on this factor all imply that addiction to alcohol produces a strong, enduring, and irremediable compulsion to drink. Those who feel that alcohol has a high addiction potential also tend to believe that an alcoholic can never learn to drink moderately again (Item 88, .52) nor learn to take the occasional social drink without getting into trouble (Item 21, -.39). They also feel that if an alcoholic sincerely wants to stop drinking, he will be unable to do so without help (Item 62, .38); that he is unlikely to stop drinking permanently (Item 1, .33); and that, even if he does, he will never completely lose his craving for alcohol (Item 60, .29). For these people, there is a serious and fundamental difference between the addicted and the non-addicted drinker.

This factor, quite understandably, also has some bearing on one's evaluation of the seriousness of alcoholism. People who view alcohol as a highly addicting substance also tend to think of alcoholism as a very serious problem (Item 79, -.32; Item 44, .28). As mentioned before, this topic will be given separate consideration later.

 Harmless Voluntary Indulgence vs. Harmful Involuntary Indulgence (Factor 14).
The items with high loadings on this factor suggested that it was closer to a pure measure of opinions about the seriousness of alcoholism than either Factor 2 or Factor 16.

People with high scores feel that alcoholism is not a serious social problem (Item 14, -.43; Item 79, -.34; Item 44, .29). They also tend to see the alcoholic as a relatively harmless individual (Item 64, -.44; Item 28, -.35) who is usually in good physical health (Item 100, -.40). However, it was felt that a somewhat broader definition would be more descriptive of the factor since it also included items which suggested a particular conception of the alcoholic.

The item with the highest loading on this factor indicated that those who downgrade the seriousness of alcoholism also feel that most alcoholics have no desire to stop drinking (Item 55, -.53). These same people feel that an alcoholic rarely, if ever, gets drunk against his own will (Item 93, -.32); that he is completely unconcerned about his drinking (Item 29, -.28); and that he has only himself to blame for his problems (Item 23, -.26). These items suggest that for some people alcoholism is

primarily a matter of excessive drinking and is motivated mainly by an uncomplicated attraction to alcohol. To reinforce this interpretation, people who accept such a picture of the alcoholic also tend to believe that most alcoholics are not neurotic (Item 80, $-.23$). Hence, the most appropriate description of the features common to this set of items seemed to be in terms of acceptance-rejection of a conception of alcoholism as harmless, voluntary indulgence and of the alcoholic as a "hearty heavy drinker".

★ Verbal or Spiritual Advice (Factor 10). This factor clearly measures the belief that exhortations of one kind or another can be used successfully to "treat" alcoholism. The defining items concern whether alcoholics can be helped by books on positive thinking (Item 25, $.47$), by spiritual guidance (Item 15, $.42$), and by reasoning with them (Item 87, $.31$). If a person accepts these methods, then he also tends to feel that will power alone will enable an alcoholic to stop drinking (Item 48, $-.29$). This interpretation of the factor is supported in a consistent way by some of the items with low loadings. Those who feel that verbal appeals can be helpful tend to reject explanations of alcoholism in terms of neurosis (Item 80, $.23$) or inherited predispositions (Item 66, $-.23$), and also tend to reject the idea that alcoholism can be treated by drugs (Item 49, $-.24$).

From the other items with loadings greater than $.20$ on this factor, it seems likely that the belief in the beneficial effects of verbal appeals is limited mainly to certain types of people. Those who endorse this belief feel that club members are more likely to become alcoholics (Item 97, $.27$), that church-goers are less likely (Item 68, $.22$) and that the middle class is most sensible about the use of alcohol (Item 90, $.24$). This suggests a rather puritan point of view, but the evidence is too meager for us to have much confidence in this hypothesis.

★ Physical Dependence on Alcohol (Factor 8). This factor is strongly defined by only two items: an alcoholic suffers great physical pain if he is deprived of alcohol (Item 73, $.41$), and alcoholics are often successfully treated by the injection of special drugs into the blood (Item 49, $.41$). These loadings suggest that we are dealing with a factor that is oriented around beliefs about the organic basis of alcoholism. However, the fact that three other items which have an organic component (Items 9, 34, and 85) have very low loadings on this factor ($.06$, 0.02 , and $-.14$ respectively) suggests that Factor 8 may be measuring a more specific organic dimension of beliefs about alcoholism.

The loading of Item 73 here suggests that the factor may be concerned particularly with the concept of physical dependence on alcohol. From this point of view, it is not surprising to find that people who feel that the alcoholic suffers great pain if deprived of alcohol also tend to feel that an alcoholic is completely powerless to stop drinking once he has started (Item 32, $.29$). It is important to note that the latter item does not load, as one might expect, on Factor 2, the "loss of control" factor. Presumably people who are willing to accept that alcoholism

involves loss of control over drinking are not so willing to accept the extreme position that the alcoholic is "completely powerless". On the other hand, people with an organic conception of alcoholism apparently feel that the alcoholic's physical dependence on alcohol does render him completely helpless.

Probably the most interesting aspect of this factor is the implications it contains for beliefs about the treatment of alcoholism. People who accept the reality of physical dependence tend to have a greater confidence in the success of treatment (Item 18, -.27). They feel that alcoholics can be treated by the injection of drugs (Item 49) and there is the suggestion that such treatment will remove the craving for alcohol (Item 60, -.26). Hence, it is reasonable that such people would consider compulsory treatment a sensible procedure (Item 10, .24).

This rather optimistic approach to the treatment of alcoholism is in complete contrast to the viewpoint pictured in Factor 3. There it was suggested that an organic conception of alcoholism was associated with a belief that alcoholics had a poor prognosis for recovery. This reversal suggests that a distinction can be drawn between the belief that alcoholism is an addiction characterized by a hopeless dependence and the belief that it is an addiction characterized only by extreme discomfort. Moreover, it seems possible that both of these beliefs could derive from an organic conception of alcoholism. For example, the organic items which did not load on this factor all referred to alcoholism as being caused by a "poison" or a "chemical factor", terms which could be taken to indicate a relatively permanent organic deficit. Item 73, on the other hand, simply referred to the "physical pain" the alcoholic suffers, a deficiency which could be considered temporary. Again, however, we are left with an interesting hypothesis which unfortunately cannot be adequately supported by the available data.

Family Drinking Behaviour and Alcoholism (Factor 7). This factor is concerned mainly with the influence of family drinking behaviour in the etiology of alcoholism. People with low scores on the factor feel that a child can be born with an "alcoholic constitution" if his mother is a heavy drinker (Item 27, .48), and that alcoholics are most likely to come from heavy drinking (Item 95, -.36) or alcoholic (Item 43, .34) families. Quite reasonably these people are likely to believe as well that there are excuses for becoming addicted to alcohol (Item 38, .28) and that the alcoholic has more problems than the average person (Item 46, .28). This set of items then, forms a consistent picture of the alcoholic as an unfortunate person who has inherited or acquired his disorder because of an unfavourable environment.

Those people who accept the importance of early conditioning as a cause of alcoholism also feel that most alcoholics get into trouble with the police (Item 4, .42). There appears to be no obvious explanation for the high loading of this item. Since there is a suggestion that these people also believe that most alcoholics live on Skid Row (Item 74, .27), it is possible that they tend to accept the "drunken bum" stereotype of the alcoholic, but the relationship of this to the belief that alcoholics

come from drinking families is not at all clear.

Another puzzling feature of this factor is that Item 66 - A person can inherit a weakness for alcohol - does not have an appreciable loading (-.17). (This suggests that the factor may be limited to items which specifically mention family drinking behaviour and its effect on the individual.)

Since the factor structure does not permit an adequate description of the features the items have in common, no clear interpretation can be given and the present definition of the factor must be considered quite tentative.

The remaining four factors do not lend themselves to any consistent interpretation and have been treated as residuals.

Factor 9. Only one item (Item 34) has a high loading (-.45) on this factor. The groups of items with loadings at least as large as .20 appear to have no underlying common features.

Factor 11. This factor has only one item with a high loading (Item 20, .50) and that item has a very low standard deviation. The group of items with loadings as large as .20 offer no reasonable interpretation.

Factor 13. This factor is strongly defined by only one item (Item 51, -.55). Otherwise the loadings are consistently low.

Factor 15. Although this factor has high loadings on four items (Items 30, 9, 36, and 97), the items appear to have no obvious characteristics in common.

Demographic Correlates. Nine of the factors (Factors 1,2,3,4,5,6,12,14, and 16) were considered strong enough and clear enough in their interpretation to be used in subsequent analyses. Factor scores were derived by selecting the four items with the highest loadings on each of these factors* and taking the arithmetic mean for those four items for each subject. For items with negative loadings, the scale scores were reversed. In no case was it necessary to use the same item in obtaining more than one factor score. The unit weights were retained for the item scores since there seemed no advantage at this stage in our research in using a more precise scoring procedure.

* This criterion was not strictly adhered to in three cases. In both Factors 12 and 14, one of the items with high loadings had a very low variability (Items 22 and 14 respectively); in Factor 3, Item 85 had generally low correlations with other items. These items were replaced in the factor scores by the item with the fifth highest loading on each factor. It should be noted, though, that had they been retained, they would not have altered materially the correlations between factor scores and demographic variables.

Table 3 shows the correlation of factor scores with age, sex and education. Since there was a significant correlation between age and sex (-0.18) and between education and sex (-0.15), second-order partial correlations were also computed (see Appendix F). This analysis had no appreciable effect on the correlations.

Education. Table 3 suggests that education is a more important determinant of opinions about alcoholism than either age or sex. Education showed a significant correlation with four of the nine factors and, when the variation due to age and sex was controlled (see Appendix F), also showed a significant association with Factor 2.

In terms of the interpretations given above for the factors, it can be said then that the more education one has, the more likely is one to believe that alcoholics come from all walks of life (Factor 6); that alcoholism is some sort of illness (Factor 12) which involves loss of control over drinking (Factor 2) and cannot be considered simply harmless over-indulgence (Factor 14); and that treatment can be beneficial for the alcoholic (Factor 3). In short, better educated people are more likely to accept some of the basic tenets of alcoholism propaganda.

Age. Age correlates significantly with only two of the factors. These correlations indicate that younger adults are more likely than older adults to accept that alcoholism is associated with emotional difficulties (Factor 1) and are more likely to be optimistic about treatment for the alcoholic (Factor 3). In both these instances, younger people tend to support the position generally adopted in alcoholism propaganda.

Sex. ~~Sex is a discriminating variable on only one factor.~~ Women are more likely than men to believe that emotional difficulties are a major cause of alcoholism (Factor 1).

It is interesting to note that none of these demographic variables correlated significantly with Factors 4, 5, and 16, and that the correlation of education with Factor 2 was only barely significant. It could be inferred from this that the population in general shares a somewhat ambivalent opinion about the ideas expressed in these factors. If this were so, it would accord with similar findings in studies of opinions about mental illness. These studies have shown that people are most reluctant to believe that anybody is unable to exercise self-control or rationality in his behaviour (cf., Star, 1955, for example). The comparable statement for alcoholism would be that people find it difficult to accept that the alcoholic has no control over his drinking (Factors 2 and 16) and that there is not an element of weakness (i.e. not using his self-control as opposed to not having any) in his behaviour (Factor 5). The absence of an association between the demographic variables and these factors certainly suggests that people may find these ideas harder to accept than those represented in the other factors.

TABLE 3

CORRELATION OF FACTORS WITH THREE DEMOGRAPHIC VARIABLES *

Factor	Age	Sex ⁺	Education
Emotional difficulties (1)	-.31 **	.17 *	.04
Loss of control (2)	.04	-.07	-.13
Prognosis for recovery (3)	.21 **	-.09	-.22 **
Alcoholic as steady drinker (4)	.10	.03	-.01
Alcoholism and character defect (5)	-.06	.01	-.03
Social status of alcoholic (6)	-.03	-.01	-.23 **
Alcoholism as an illness (12)	.02	.04	.19 **
Harmless voluntary indulgence (14)	.01	.05	-.22 **
Addiction liability (16)	.11	-.03	.01

* The standard error of the correlation coefficient with an N of 200 is 0.071. Correlations as large as .18 are beyond the .01 level of significance (**); correlations as large as .14 are beyond the .05 level of significance (*).

+ The correlations between sex and factor scores are point biserial correlations. A positive correlation indicates that women are more likely to have a high score on the factor than men.

By the same reasoning, it could be inferred that the general public has a confused picture of the kinds of drinking characteristic of alcoholism (Factor 4). Since Factor 2 was the only other factor which gave prominence to symptoms of alcoholism, and since it also did not correlate strongly with the demographic variables, it may be that the public has a genuine inability to distinguish an alcoholic from a non-alcoholic drinker.

DISCUSSION

Any assessment of an isolated factor analytic study such as this must necessarily be somewhat speculative. This is so because a factor analysis, at least with respect to hypothesis-testing, lacks the rigor of other statistical techniques. To ensure that we have isolated and correctly identified the significant dimensions of beliefs about alcoholism, we would properly have to repeat the analysis with a different set of items and a different sample of respondents. Since such a development seems unlikely to occur in the near future, we will attempt here to draw together some tentative conclusions about the structure of popular beliefs about alcoholism - always with the proviso that any such generalizations are somewhat premature.

The initial sampling of items was broad enough that we feel a new analysis would be unlikely to produce another strong factor. All it is likely to do is clarify the present factors (possibly indicating different interpretations) and introduce one or more novel minor factors. So we have some assurance that no major dimension has been overlooked. Furthermore, from the analysis we can at least dichotomize the factors in terms of their significance for beliefs about alcoholism. Although the distinction between strong and weak factors has to be somewhat arbitrary, in general we can say that a factor is strong relative to other factors if it accounts for proportionately more of the common variance. By this reasoning, we feel that only those factors which contribute at least six per cent to the common variance can at this stage in our research be considered as probable invariant factors. This cutting-point seems quite justified since six of the seven factors which did not meet this criterion (Factors 8, 9, 10, 11, 13, and 15) had few large factor loadings, and the remaining one (Factor 7) included some anomalous items which prevented a clear interpretation of the factor.

Of the nine factors which were acceptable by this criterion, Factor 6 was by far the strongest. If, as suspected, this is a general evaluative factor, then it would appear that there is a strong affective component in beliefs about alcoholism. In other words, the statements about alcoholism one is willing to accept may be determined more by one's attitude toward the alcoholic than by any specific cognitive orientation toward alcoholism. Apart from Factor 6, Factors 1 and 5 offered the fewest difficulties in interpretation: all the defining items were quite consistent with each other. It seems highly probable that beliefs about the importance of psychological factors (Factor 1) and beliefs about the prominence of weak will (Factor 5) are primary factors in opinions about alcoholism.

The interpretations of the remaining factors were for the most part much less obvious, so the labeling of these must be considered somewhat debatable. In these cases, it is possible that the definition has been influenced by items whose loadings on the factor are quite fortuitous or simply that the wrong inference has been made about the characteristics that the defining items have in common. Only a replication of the factor analysis would provide convincing support for these interpretations.

Nevertheless we feel that, within the context of the present study, the interpretations are appropriate. Our confidence in these partially derives from the considerable support they receive from the findings of the earlier survey (Marcus, 1961). For example, that survey showed that many people are pessimistic about the recovery of the alcoholic primarily because they feel he has no desire to recover and, secondarily, because they feel he is unable to recover. This corresponds directly with the factor structure for Factor 3. The similarity between the survey findings and the factors is not so clearcut in the other instances, but in no case do the two studies produce contradictory or completely unrelated results. This corroboration offers some evidence that we have obtained meaningful factors.

Therefore, while we do not have a reliable yardstick of confidence by which to order the factors, we do have some basis for saying that the nine strongest factors are measuring important dimensions of beliefs about alcoholism. If we can infer from this that the factors indicate the most central beliefs about alcoholism, then individual factor scores or a composite factor score can be used as a general measure of information about alcoholism. On the other hand, some of the factors seem to have implications beyond that of direct measures of opinion. We have already suggested that Factor 6, superficially concerned with the social status of the alcoholic, may also be a reflection of attitudes toward the alcoholic. Probably most of the strong factors can be construed as measuring something derivative from their surface content. Let us consider the implications of four of these factors.

We implied in the introduction to this paper that, if the layman were to play an effective role in the control of alcoholism, he would have to be able to identify an alcoholic with some degree of accuracy. Now it is obvious that a person will have difficulty in recognizing alcoholism to the extent that he is unable to discriminate problem drinking from normal drinking. This ability appears to be measured fairly directly by Factor 4. Our earlier survey (Marcus, 1961) showed that most people were confused about the difference between a heavy drinker and an alcoholic and could distinguish them only by saying that the alcoholic drinks more or, more commonly, drinks "all the time". Although most of the respondents were aware that alcoholism involved a strong compulsion to drink and loss of control, this seemed to have no specific implications for the drinking behaviour of the alcoholic. This situation was replicated in the factor analysis, where beliefs about loss of control (Factor 2) and beliefs about drinking behaviour (Factor 4) turned out to be orthogonal. Our sample in general also tended to accept the notion that the alcoholic is a steady drinker (see Marcus, 1963), although the failure of the factor scores to correlate with any of the demographic variables suggested that this belief

was not very well-established. All of this indicates that people do suffer from a good deal of confusion about the drinking behaviour which is characteristic of the alcoholic. It also shows that Factor 4 reflects this confusion and will probably serve as a sensitive measure of people's ability to recognize an alcoholic from his drinking behaviour.

In the same vein, willingness to intervene in an alcoholic problem is as essential as the ability to recognize the problem. We would single out Factor 3 (prognosis for recovery) as the most appropriate measure of this orientation. Since the factor is associated with the beliefs that the alcoholic is unwilling or unable to recover, it seems reasonable that pessimism about treatment would be extended to pessimism about intervention of any kind. As an added feature, the factor structure also suggests the means whereby people can be influenced to adopt a more positive orientation toward assisting the alcoholic.

We have already mentioned that beliefs about the seriousness of alcoholism did not form an independent factor but were related to three different factors. The loadings of the items measuring this belief indicated that a person tends to consider alcoholism a serious problem if he believes that it involves loss of control (Factor 2), if he believes that alcohol has a high addiction liability (Factor 16), or if he believes that alcoholism is not simply harmless voluntary indulgence (Factor 14). Since the seriousness items had higher loadings on Factor 14 than on the other two factors, we are inclined to accept that factor as the best indirect measure of how seriously people regard alcoholism. There is also a certain logic in this selection. Beliefs about the seriousness of the problem should logically be a compound of beliefs about the social consequences and beliefs about the personal consequences of addiction to alcohol. All of the items with high loadings on Factor 14 bear some relation to one or the other of these, whereas Factors 2 and 16 are concerned more specifically with just the personal consequences. So we think that Factor 14 is probably the best indirect measure of beliefs about seriousness. One important inference from all this is that one's evaluation of the seriousness of alcoholism does not seem to be primarily dependent upon one's objective judgment of the impact of alcoholism on the community but may be more closely related to one's conception of the alcoholic. For example, Factor 14 suggests that those who consider the alcoholic to be what we have called a "hearty heavy drinker" are unlikely to take his problem seriously.

One of the most intriguing findings of this study was that the degree of acceptance of the disease conception of alcoholism (Factor 12) was independent of beliefs about other aspects of alcoholism. We say intriguing because of the great reliance placed on this question in opinion polls about alcoholism. As we have shown, the items heavily represented in the factor were almost exclusively statements of the disease conception in its most general form. This is really not too surprising in view of Marcus' (1961) finding that, whereas most people accept the idea that alcoholism is a disease, the reasons for their belief are extremely varied and the belief has no apparent concomitants. This lack of correspondence with other beliefs indicates that the factor is highly specific in its

content and that one's stand on this issue is not a useful index of one's understanding of the problem of alcoholism. Of all the major factors derived from the analysis, this is the only one which we feel is of very limited usefulness as a measure of information about alcoholism.

Apart from the data on how beliefs about alcoholism are organized, we have some information on who believes what. The study showed that better educated people were most likely to have opinions consistent with the prevailing professional viewpoint, although the relationships were of low magnitude. Age and sex, on the other hand, had very weak associations with the factor scores. These findings parallel those found in studies of opinions about mental illness, where almost every study has shown that education is the demographic variable which correlates highest with opinions. In explaining this relationship, it is usually suggested that better educated people have a greater exposure to information on the subject or have a closer identification with the professional ideology. However, neither the obtained relationships nor the explanation for them may be as simple as they appear. In the former case, Cohen & Struening (1962) have presented evidence that the relation between education and factor scores is not necessarily linear (and may, for example, be U-shaped). In the latter, Freeman (1961) has shown that the correlations with education can be most parsimoniously accounted for on the basis of differential verbal ability. Whatever the status of these relationships, though, the low correlations suggest that we will have to look elsewhere for major determinants of opinions about alcoholism.

This brief overview of the factor structure and some of its implications is necessarily based on somewhat tenuous assumptions since the factor structure in its present form must be considered as merely a first approximation to the true structure of beliefs about alcoholism. We have felt obliged to examine the analysis in detail, and occasionally to step outside the strictly empirical area, because we see little possibility that the factor analytic studies needed to expand and validate our findings will be carried out. In lieu of such a development, however, some of the hypotheses that have been suggested could be tested by more orthodox experimental methods. This would indirectly help to evaluate the factor structure and would be of direct benefit to alcohol educators.

This is the first time we have mentioned the relevance of this study to alcohol education, but in fact the investigation was initiated primarily to provide alcohol educators with an adequate instrument for measuring opinions about alcoholism. In this sense, whatever we have found out about the structure of those opinions is a desideratum. From this practical point of view, the analysis has accomplished its main purpose of reducing the large variety of potential opinions about alcoholism to a much smaller number which represent the most stable and central beliefs. In the process it has also shown that certain opinions which some might have thought important have relatively little connection with other opinions about alcoholism. It should be noted, though, that although the high inter-correlations among the items defining the factors provide some assurance that the factors have a psychological as well as a statistical unity, the usefulness of the questionnaire derived from the

factors will be dependent on the satisfactory outcome of reliability studies.

Outside of the descriptive data on factor scores, the most significant finding so far as alcohol education is concerned is that opinions about alcoholism are not well-structured. This is evidenced mainly by the generally low correlations among the items. Because of this, there were few high factor loadings and the extracted factors accounted for a relatively small proportion of the total variance. Although this is in sharp contrast to studies of more integrated belief systems (such as political or religious beliefs), it compares favorably with the findings from similar studies of opinions about mental illness (Cohen & Struening, 1962; Freeman, 1961; Nunnally, 1957). The latter studies all report low correlations among the opinion items and generally weak factors. This correspondence was to be expected in view of the many similarities between these two problems (see Star, no date; Cumming & Cumming, 1957), and indicates further that much of the social research on mental illness is highly relevant to alcoholism. The fact that beliefs about alcoholism are poorly-integrated can be attributed partly to the inherent complexity of the disorder and its manifestations and partly to the lack of salience that the problem has for most people. However, we feel very strongly that this weak organization and many of the apparent contradictions among opinions about alcoholism are more likely to be due to real conflicts between a person's experiences and values on the one hand and the alcoholism propaganda he is asked to accept on the other. This problem, and other implications for alcohol education, are dealt with more thoroughly in another paper (Marcus, 1963). It is mentioned here mainly to counteract the obvious conclusion that beliefs weakly held can be easily influenced. Popular education on a controversial issue such as alcoholism will not be effective if it is limited to providing the "facts"; it must also attempt to resolve the basic conflicts people have about why the alcoholic is the way he is.

REFERENCES

- Cohen, J., & Struening, E. L. Opinions about mental illness in the personnel of two large mental hospitals, J. Abnorm. Soc. Psychol., 1962, 64, 349-360.
- Couch, A., & Keniston, K. Yeasayers and Naysayers: agreeing response set as a personality variable. J. Abnorm. Soc. Psychol., 1960, 60, 151-174.
- Cowen, E. L., Underbert, Rita P., & Verrillo, R. T. The development and testing of an attitude to blindness scale, J. Soc. Psychol., 1958, 48, 297-304.
- Freeman, H. E. Attitudes toward mental illness among relatives of former patients. Amer. Soc. Rev., 1961, 26, 59-66.
- Freeman, H. E., & Kassebaum, G. G. Relationship of education and knowledge to opinions about mental illness. Ment. Hyg., 1960, 44, 43-47.
- Gurin, G., Veroff, J., & Feld, Sheila. Americans view their mental health. New York: Basic Books, 1960.
- Harman, H. H. Modern factor analysis. Chicago, University of Chicago Press, 1960.
- Jellinek, E. M. The disease concept of alcoholism. New Haven: Hill-house Press, 1960.
- Joint Commission on Mental Illness and Health. Action for mental health. New York: Basic Books, 1961.
- Kaiser, H. F. The varimax criterion for analytic rotation in factor analysis. Psychometrika, 1958, 23, 187-200.
- Kitsuse, J. I. Societal reaction to deviant behaviour: problems of theory and method. Soc. Problems, 1962, 247-256.
- Kogan, N. Attitudes toward old people: the development of a scale and an examination of correlates. J. abnorm. soc. Psychol., 1961, 62, 44-54.
- Lemert, E. M. Social pathology, New York; McGraw-Hill, 1951.
- Marcus, A. M. Popular beliefs about alcoholism: an exploratory investigation. Addiction Research Foundation, 1961 (Mimeo).
- Marcus, A. M. Description and discussion of Jellinek's remarks on public attitudes toward the idea of alcoholism as an illness. A. R. F. Studies in Alcohol Education, Research Memo 4, 1962 (Mimeo).
- Mechanic, D. Some factors in identifying and defining mental illness. Ment. Hyg., 1962, 46, 66-74.

Nunnally, J. C. The communication of mental health information: a comparison of the opinions of experts and the public with mass media presentations. Behav. sci., 1957, 2, 222-230.

Nunnally, J. C. Popular conceptions of mental health. New York: Holt, Rinehart & Winston, 1961.

Peabody, D. Attitude content and agreement set in scales of authoritarianism, dogmatism, anti-Semitism, and economic conservatism. J. adnorm. soc. Psychol., 1961, 63, 1-11.

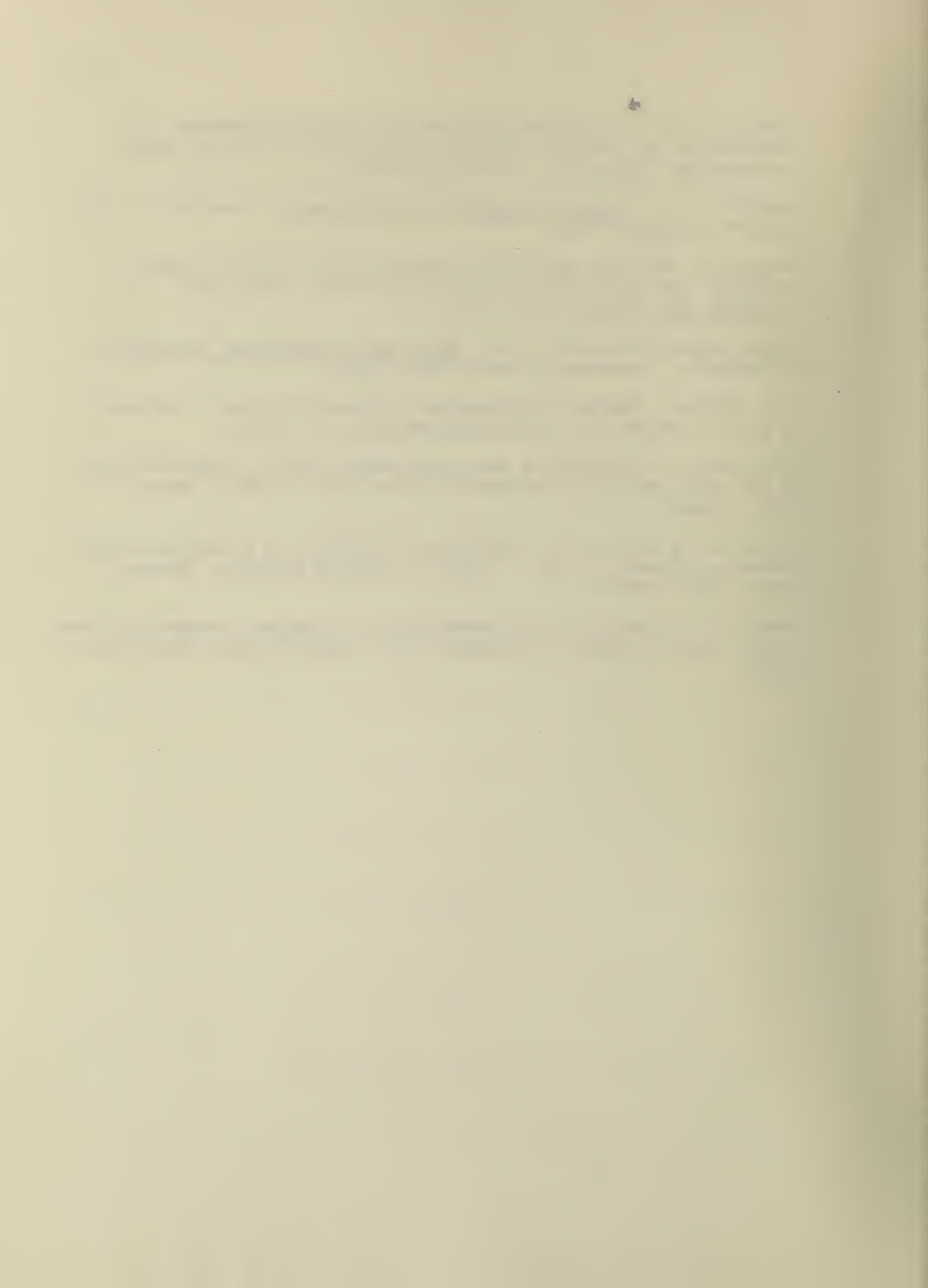
Pennsylvania Mental Health, Inc. Mental health education: a critique. Philadelphia: Pennsylvania Mental Health, 1960.

Star, Shirley. Popular interpretations of human behaviour: six people in action. Chapter 4 of unpublished manuscript. No date.

Star, Shirley. The public's idea about mental illness. Paper presented at the annual meeting of the National Association for Mental Health, 1955. (Mimeo).

Weisler, M. & Marcus, A. M. Temperance literature and alcohol propaganda: review and comment. A. R. F. Studies in Alcohol Education, Research Memo 8, 1962 (Mimeo).

Yuker, H. E., Block, J. R., & Campbell, W. J. A scale to measure attitudes toward disabled persons. Albertson, N. Y.: Human Resources Foundation, 1960.



APPENDIX A

THE 100-ITEM ALCOHOLISM QUESTIONNAIRE

This was the questionnaire used with the Toronto sample, the Ryerson sample, and the Patient sample. The complete 100-item questionnaire is presented along with the response frequencies for the Toronto sample.

ALCOHOLISM AND DRUG ADDICTION RESEARCH FOUNDATION
COMMUNITY OPINION SURVEYS

You are being asked to participate in a study of alcohol problems. Your participation will supply valuable information to those responsible for the nation's well being.

On the following pages you will find a number of statements about alcoholism. We want to know how much you agree or disagree with each of the statements. To the right of each statement you can find a rating scale:

Disagree				Agree		
1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The points along the scale (1,2,3,...7) can be interpreted as follows:

1. Completely disagree
2. Mostly disagree
3. Disagree more than agree
4. Neutral
5. Agree more than disagree
6. Mostly agree
7. Completely agree

The use of the scale can be illustrated with the following statement:

"There are very few female alcoholics."

If you agreed completely with this statement, you would place a mark in column 7. If you agreed slightly with the statement, you would place a mark in column 5. If you mostly disagreed with the statement, you would place a mark in column 2. In this manner you can indicate the extent to which you agree or disagree with each of the statements on the following pages.

Like everyone else, you will probably feel that you do not know the answer to some of the statements. When this occurs, please make the best guess you can.

Please make your marks inside the agreement or disagreement boxes of the scales. Do it like this:

Disagree			Agree			
1	2	3	4	5	6	7
		X				

Do not do it like this:

Disagree			Agree			
1	2	3	4	5	6	7
		X				

Please make sure that you make a mark for each statement. Leave none of the statements blank and make only one mark for each. You should not spend more than a few seconds marking each statement. If it is difficult for you to make up your mind, make the best guess that you can and go on to the next one.

Disagree			Agree			
1	2	3	4	5	6	7

1. An alcoholic may stop drinking for a while, but he usually goes back to it again.

15	8	16	14	40	37	70
----	---	----	----	----	----	----

2. Alcoholism is not a disease.

98	11	13	10	9	12	47
----	----	----	----	---	----	----

3. An alcoholic's basic troubles were with him long before he had a problem with alcohol.

23	14	11	11	22	32	87
----	----	----	----	----	----	----

4. Many alcoholics never get into trouble with the police.

24	18	13	13	23	21	88
----	----	----	----	----	----	----

Disagree

Agree

1 2 3 4 5 6 7

5. There is no more alcoholism in the slum districts than anywhere else.

17	22	10	8	17	22	104
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6. An alcoholic can get into as much trouble by drinking beer as by drinking liquor.

26	12	14	11	15	19	103
----	----	----	----	----	----	-----

7. A drinking problem can often be avoided by changing one's job.

61	30	21	20	25	20	23
----	----	----	----	----	----	----

8. A person who frequently stays intoxicated for several days at a time is not necessarily an alcoholic.

70	25	13	10	16	17	49
----	----	----	----	----	----	----

9. The alcoholic has a poison in his system which produces the craving for alcohol.

90	10	8	22	13	14	43
----	----	---	----	----	----	----

10. The most sensible way to deal with alcoholics is to compel them to go somewhere for treatment.

42	12	14	17	11	23	81
----	----	----	----	----	----	----

1. * 11. Most alcoholics do not realize that something is wrong with them.

28	23	12	12	19	31	75
----	----	----	----	----	----	----

3. * 12. Preferring to drink alone rather than with friends is not a sign of alcoholism.

80	26	13	19	7	13	42
----	----	----	----	---	----	----

2. * 13. Alcoholics generally are very unhappy people.

17	12	8	18	26	32	87
----	----	---	----	----	----	----

4. * 14. Alcoholism is a relatively minor social problem.

132	19	18	5	10	3	13
-----	----	----	---	----	---	----

Disagree

Agree

1 2 3 4 5 6 7

- * 15. Spiritual guidance will often help an alcoholic to stop drinking.

17	9	12	23	42	40	57
----	---	----	----	----	----	----

30. * 16. An alcoholic usually has something in his past which is driving him to drink.

36	17	19	20	42	28	38
----	----	----	----	----	----	----

- i 17. Most alcoholics could drink less if they wanted to.

62	18	18	19	31	18	33
----	----	----	----	----	----	----

42. * 18. Most alcoholics could not be rehabilitated even if more help were available for them.

80	37	26	15	10	11	21
----	----	----	----	----	----	----

19. Most alcoholics keep their families in continual want.

17	13	13	23	31	30	73
----	----	----	----	----	----	----

20. Alcoholism is not brought on as a punishment for sins.

19	3	3	10	6	8	151
----	---	---	----	---	---	-----

32. * 21. With proper treatment, an alcoholic can learn to take the occasional social drink without getting into trouble.

99	16	15	9	15	11	35
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96. * 22. The alcoholic deserves the same consideration as any other sick person.

6	4	6	4	9	20	151
---	---	---	---	---	----	-----

31. * 23. The alcoholic has only himself to blame for his problems.

46	21	34	17	24	19	39
----	----	----	----	----	----	----

17. * 24. Alcoholism is more likely to occur in people who worry a lot about everyday problems.

23	15	13	24	28	42	55
----	----	----	----	----	----	----

25. Books on "positive thinking" have helped many alcoholics to overcome their problems.

32	15	9	79	34	13	18
----	----	---	----	----	----	----

Disagree

Agree

1 2 3 4 5 6 7

26. The alcoholic is seldom helped by any sort of medical or psychological treatment.

81	43	23	16	14	8	15
----	----	----	----	----	---	----

27. Children are never born with an alcoholic constitution because of the heavy drinking of their mothers.

16	8	8	37	9	11	111
----	---	---	----	---	----	-----

28. The harm done by alcoholics is generally over-estimated.

85	23	19	20	19	18	16
----	----	----	----	----	----	----

29. Most alcoholics are completely unconcerned about their problem.

49	33	32	17	16	23	30
----	----	----	----	----	----	----

30. Alcoholics usually do not have strong feelings of inadequacy.

60	34	18	32	16	13	27
----	----	----	----	----	----	----

31. Alcoholism usually comes about very suddenly.

135	23	14	10	7	6	5
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32. On any given occasion, an alcoholic is completely powerless to stop drinking once he has started.

23	16	25	15	21	45	55
----	----	----	----	----	----	----

33. There are very few respectable and productive citizens who have been alcoholics.

108	32	12	12	7	15	14
-----	----	----	----	---	----	----

34. There are no medicines that can reduce the alcoholic's craving for alcohol.

54	22	9	50	8	15	42
----	----	---	----	---	----	----

35. Most alcoholics behave quite normally when they are not drinking.

15	14	10	11	21	43	86
----	----	----	----	----	----	----

Disagree

Agree

1 2 3 4 5 6 7

35. The alcoholic cannot help it when he treats his family badly.

21	16	11	28	28	41	55
----	----	----	----	----	----	----

44. The alcoholic drinks excessively mainly because he enjoys drinking.

71	41	21	13	16	7	31
----	----	----	----	----	---	----

37. There is no excuse for anyone becoming addicted to alcohol.

38	34	26	33	14	16	39
----	----	----	----	----	----	----

16. Alcoholics are usually more tense and nervous than other people.

9	4	10	18	29	47	83
---	---	----	----	----	----	----

40. One cannot do anything for an alcoholic until he decides he wants to be helped.

4	7	11	2	9	24	143
---	---	----	---	---	----	-----

5. Alcoholics are seldom found in important positions in business.

90	27	29	7	15	16	16
----	----	----	---	----	----	----

42. A heavy drinker is not an alcoholic if he is able to stop drinking for several weeks at a time.

32	22	20	14	28	21	63
----	----	----	----	----	----	----

36. A person is not more likely to become an alcoholic if there are other alcoholics in his family.

27	15	16	34	15	25	68
----	----	----	----	----	----	----

44. There are more alcoholics in Canada today than ever before.

4	1	8	30	22	19	116
---	---	---	----	----	----	-----

47. There is no such thing as an alcoholic being too far gone for him or anyone else to bring about his recovery.

20	15	10	10	21	27	97
----	----	----	----	----	----	----

38. The alcoholic has no more real problems than the average person.

40	30	17	5	18	21	69
----	----	----	---	----	----	----

Disagree

Agree

1 2 3 4 5 6 7

47. Very few alcoholics are sent to mental hospitals for treatment.

14	5	18	50	26	26	61
----	---	----	----	----	----	----

48. Will power alone will not enable an alcoholic to stop drinking.

38	16	9	15	24	33	65
----	----	---	----	----	----	----

49. Alcoholics are often successfully treated by injection of special drugs into the blood.

28	7	18	106	14	13	14
----	---	----	-----	----	----	----

50. The alcoholic is not helpless to control the amount of alcohol he drinks.

71	28	23	20	20	13	25
----	----	----	----	----	----	----

51. Alcoholism hardly ever develops because a person has had some terrible personal tragedy.

37	23	40	21	19	16	44
----	----	----	----	----	----	----

52. Alcoholism is not a type of mental illness.

41	22	39	15	15	16	52
----	----	----	----	----	----	----

53. Very few alcoholics come from families in which both parents were abstainers.

46	19	29	42	22	13	29
----	----	----	----	----	----	----

54. Nobody who drinks is immune from alcoholism.

42	13	10	14	23	21	77
----	----	----	----	----	----	----

55. Most alcoholics have no desire to stop drinking.

44	23	31	17	23	17	45
----	----	----	----	----	----	----

56. Alcoholics pay little attention to their personal appearance.

27	22	33	24	26	30	38
----	----	----	----	----	----	----

57. Alcoholics, on the average, have a poorer education than other people.

99	39	22	17	8	8	7
----	----	----	----	---	---	---

Disagree

Agree

1 2 3 4 5 6 7

- 4 58. A heavy drinker from the upper class or middle class has less chance of becoming an alcoholic than a heavy drinker from the lower class.

121	24	18	17	6	6	8
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- 18 59. Unhappy marriages and other unpleasant family situations often lead to alcoholism.

9	6	9	7	36	40	93
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60. A recovered alcoholic never completely loses his craving for alcohol.

33	24	16	33	13	22	59
----	----	----	----	----	----	----

- 27 61. Alcoholism is best described as an illness rather than a habit.

21	7	2	3	19	31	116
----	---	---	---	----	----	-----

62. Even if an alcoholic has a sincere desire to stop drinking, he cannot do so without help from others.

14	7	11	8	26	37	97
----	---	----	---	----	----	----

63. A person who often drinks to the point of drunkenness is not necessarily an alcoholic.

9	6	10	12	26	26	111
---	---	----	----	----	----	-----

64. Alcoholics seldom harm anybody but themselves.

73	26	25	10	23	17	26
----	----	----	----	----	----	----

- 5 65. Alcoholics usually have severe emotional difficulties.

9	7	9	21	40	45	69
---	---	---	----	----	----	----

66. A person can inherit a weakness for alcohol.

63	25	13	31	20	16	32
----	----	----	----	----	----	----

- 43 67. In recent years very little success has been met in treatment of the alcoholic.

70	34	27	32	7	14	16
----	----	----	----	---	----	----

68. People who attend church regularly are less likely to become alcoholics than those who do not.

39	20	15	16	26	37	47
----	----	----	----	----	----	----

Disagree

Agree

1 2 3 4 5 6 7

69. The kind of people who become alcoholics usually keep to themselves and avoid talking about themselves and their problems.

29	13	26	25	31	33	43
----	----	----	----	----	----	----

70. People who become alcoholics do not necessarily lack will power.

22	16	14	12	43	44	49
----	----	----	----	----	----	----

71. Many drinkers who are not alcoholics will sometimes take a drink first thing in the morning.

41	26	16	24	26	16	51
----	----	----	----	----	----	----

6 72. The average alcoholic is usually unemployed.

71	34	41	16	15	17	16
----	----	----	----	----	----	----

73. An alcoholic suffers great physical pain if he is deprived of alcohol.

26	11	13	41	27	23	59
----	----	----	----	----	----	----

40 74. Most alcoholics do not live on Skid Row.

8	6	6	18	27	25	110
---	---	---	----	----	----	-----

3 75. Most alcoholics do not have the strength of will to stop drinking.

12	7	10	15	33	35	88
----	---	----	----	----	----	----

8 76. Most of the problems that alcoholics have are the direct result of their excessive drinking.

21	13	23	17	35	37	54
----	----	----	----	----	----	----

77. Most alcoholics need psychiatric help.

10	7	9	14	37	28	95
----	---	---	----	----	----	----

8 78. Alcoholism is a sign of character weakness.

30	28	25	18	32	27	40
----	----	----	----	----	----	----

79. The seriousness of the alcoholism problem in this country has been exaggerated.

100	24	24	23	8	7	14
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	Disagree				Agree		
	1	2	3	4	5	6	7
80. Most alcoholics are not neurotic.	31	19	31	44	22	21	32
81. The alcoholic generally cares a great deal about what happens to himself and his family.	44	33	34	22	22	22	23
82. There are not enough facilities to take care of the alcoholics who want help.	11	7	5	41	21	24	91
83. Most alcoholics are either drunk or drinking every day.	13	14	13	13	29	36	82
84. A person usually has very little warning before he becomes an alcoholic.	50	27	20	19	22	23	39
85. There is a chemical factor in the body that causes some drinkers to become alcoholics.	64	19	8	58	14	10	27
86. If he wanted to, an alcoholic could have one or two drinks and no more.	128	23	15	11	4	8	11
87. It is possible to get an alcoholic to stop drinking by reasoning with him.	70	32	22	19	25	17	15
88. Once a person becomes an alcoholic, he can never learn to drink moderately again.	29	13	15	16	17	20	90
89. Many people who drink heavily, but only on weekends, are alcoholics.	87	39	16	15	18	13	12
90. The middle class is more sensible about the use of alcohol than either the upper or lower class.	64	14	15	32	21	22	32

Disagree

Agree

1 2 3 4 5 6 7

91. A doctor cannot get an alcoholic to stop drinking by convincing him that alcohol is damaging his body and ruining his health.

16	11	21	10	26	34	82
----	----	----	----	----	----	----

92. It is almost impossible to get an alcoholic to admit that he is an alcoholic.

16	9	16	16	20	40	83
----	---	----	----	----	----	----

93. The alcoholic rarely, if ever, gets drunk against his own will.

43	20	13	29	23	23	49
----	----	----	----	----	----	----

94. The alcoholic is basically a spineless person who has found an easy way out of his problems.

63	22	30	21	20	18	26
----	----	----	----	----	----	----

95. Most alcoholics were brought up in homes in which there was a lot of drinking.

91	34	24	22	10	10	9
----	----	----	----	----	----	---

96. The alcoholic is not a morally weak person.

26	10	25	25	31	26	57
----	----	----	----	----	----	----

97. People who belong to clubs and other social organizations are more likely to become alcoholics than those who do not.

72	35	25	24	17	7	20
----	----	----	----	----	---	----

98. Alcoholics are the only drinkers who get intoxicated on work days.

103	20	28	10	12	11	16
-----	----	----	----	----	----	----

99. Many cases of alcoholism in adults can be traced to emotional experiences in childhood.

35	19	22	42	32	24	26
----	----	----	----	----	----	----

100. Alcoholics are usually in good physical health.

72	38	25	21	15	12	17
----	----	----	----	----	----	----

Now that you have completed the questionnaire would you please check to make sure that you have done the following things:

1. Rated your agreement or disagreement with every statement in the questionnaire. If you have failed to mark a single statement, we will be unable to use your questionnaire.
2. Made only one mark for each statement.

THANK YOU AGAIN FOR YOUR HELP IN THIS RESEARCH.

APPENDIX B

INSTRUCTIONS TO INTERVIEWERS

Canadian Facts Ltd., the organization which distributed the questionnaires to the Toronto sample, prepared the following instructions for their interviewers. There instructions were in addition to the usual guidelines provided for obtaining a quota sample.

YOUR APPROACH. Canadian Facts is conducting this study for the Alcoholism Research Foundation - a foundation of the provincial Government. The Government is responsible for education on this problem, and must keep abreast of what people are thinking - tell this to your respondents.

It is an interesting fact that interviewers who are total abstainers often obtain different results on surveys about alcoholism than do interviewers who take a drink now and again. The only explanation for this is that something in their attitude toward drinking gets across to their respondents, making these answer in a way that they think the interviewer will approve of - rather than as they really feel.

We all have attitudes toward alcohol, favourable or unfavourable. For this survey, will you please try to forget that you have any attitude at all, either pro or con, and just pretend that it is Product 81 versus Product 89 that you are investigating? This does not mean that you should forget the social value of this study, which is enormous! Its results will provide the Alcoholism Research Foundation with valuable material for its research. This test has never before been done with a general sample of the population; only with "special samples" such as students and other selected groups, and it will throw light not only on alcohol addiction but on the problem of addiction in general.

YOUR PROCEDURE. The "scaling" idea is not new to our interviewers, and in any case is clearly outlined on the questionnaire. Explain to the respondent how to mark his questionnaire, and stay with him through the first couple of pages, until it is clear that he knows what he is doing. It takes about half an hour to complete - so use the balance of this time to install a questionnaire with another person a few houses along the street and get him started - then come back to pick up the first respondent's questionnaire - in fact, you may find with a little experience that you can get two people started before you need to come back for the first questionnaire.

REFUSALS. We are very interested in getting an idea of how many of your respondents refuse to fill out the questionnaire on the grounds of dislike of the subject matter. We aren't particularly interested in how many refusals you obtain because the person is just going out, is putting the baby to bed, doesn't want to miss "Father Knows Best," and so on - but we are vitally interested in knowing how many out of your quota of respon-

dents show reluctance to have anything to do with a questionnaire that deals with this particular subject. You yourself are in the best position to know the actual grounds of the refusal - if you believe that the reason for refusal is "alcohol," even though not specifically stated, will you note this, and note how many there are like this? There may be none - or there may be a perceptible stiffening up as soon as you say "alcohol," and an excuse, "Sorry, I'm busy."

Try to overcome this resistance, if it arises. We are anxious not to leave out of our sample a high proportion of those for whom alcohol has such overwhelming emotional implications that they can hardly bring themselves to think about it. Note the total of such refusals, if any, on the front of this form, using the tally system.

COMPLETING THE QUESTIONNAIRE. The Alcoholism Research Foundation would like all the answer-spaces on the questionnaire to be filled out. If a question is not answered at all, it could be that it is a very touchy or difficult one for the respondent - therefore we'd like it filled out.

It takes only a minute, on your return, to flip through the pages and make sure that everything is checked. If you find something that is not, get the respondent to rectify the omission then and there. If he states that it is something he couldn't make up his mind about, or that it wasn't clear what the statement meant, assure him that there are no right or wrong answers; that it is what it seems to him to mean that is important; that it is his feelings or impressions, not his actual knowledge that we want; and that we would prefer him not to study each item - just read it to himself, re-read it if he doesn't get it at once, then check where he feels is most appropriate.

DO NOT TRY TO INTERPRET THESE QUESTIONS FOR THE RESPONDENT. One thing we are studying is whether the statements are worded in a way that is meaningful - and this can be told from the final tabulation, if the interviewers do not re-word or explain the questions. If the respondent cannot understand a statement, read it out loud to him, then say, "Now, where do you think you should place your checkmark in reply to that?" Sometimes a person will get a better idea if something that puzzles him is taken in through his ears than through his eyes - so try it that way if he seems badly stuck.

ENCOURAGE SPEED. We don't want this to "save time" on the survey, but because first impressions are more meaningful on this survey than well-studied-out responses. Tell your respondent this, if he wants to give every item a great deal of thought.

NOTE WHERE THE "X" MARKS SHOULD BE PLACED. Not on the lines, but in the boxes between the lines! Some people, left to themselves, go astray here. Stay with them until you are sure they do it properly.

APPENDIX C

MEANS AND STANDARD DEVIATIONS FOR THE TORONTO SAMPLE
ON THE 100-ITEM ALCOHOLISM QUESTIONNAIRE

ITEM	MEAN	STANDARD DEVIATION
1. An alcoholic may stop drinking for a while, but he usually goes back to it again.	5.24	1.87
2. Alcoholism is not a disease.	3.23	2.55
3. An alcoholic's basic troubles were with him long before he had a problem with alcohol.	5.20	2.15
4. Many alcoholics never get into trouble with the police.	5.04	2.22
5. There is no more alcoholism in the slum districts than anywhere else.	5.34	2.17
6. An alcoholic can get into as much trouble by drinking beer as by drinking liquor.	5.23	2.25
7. A drinking problem can often be avoided by changing one's job.	3.35	2.15
8. A person who frequently stays intoxicated for several days at a time is not necessarily an alcoholic.	3.62	2.50
9. The alcoholic has a poison in his system which produces the craving for alcohol.	3.36	2.49
10. The most sensible way to deal with alcoholics is to compel them to go somewhere for treatment.	4.68	2.43
11. Most alcoholics do not realize that something is wrong with them.	4.82	2.29
12. Preferring to drink alone rather than with friends is not a sign of alcoholism.	3.27	2.42
13. Alcoholics generally are very unhappy people.	5.34	1.99
14. Alcoholism is a relatively minor social problem.	2.02	1.78
15. Spiritual guidance will often help an alcoholic to stop drinking.	5.06	1.86

Appendix C (cont'd.)

	ITEM	MEAN	STANDARD DEVIATION
16.	An alcoholic usually has something in his past which is driving him to drink.	4.26	2.12
17.	Most alcoholics could drink less if they wanted to.	3.63	2.26
18.	Most alcoholics could not be rehabilitated even if more help were available for them.	2.78	2.05
19.	Most alcoholics keep their families in continual want.	5.10	1.98
20.	Alcoholism is not brought on as a punishment for sins.	6.05	1.94
21.	With proper treatment, an alcoholic can learn to take the occasional social drink without getting into trouble.	2.99	2.39
22.	The alcoholic deserves the same consideration as any other sick person.	6.35	1.45
23.	The alcoholic has only himself to blame for his problems.	3.83	2.22
24.	Alcoholism is more likely to occur in people who worry a lot about their everyday problems.	4.83	2.05
25.	Books on "positive thinking" have helped many alcoholics to overcome their problems.	3.90	1.74
26.	The alcoholic is seldom helped by any sort of medical or psychological treatment.	2.62	1.90
27.	Children are never born with an alcoholic constitution because of the heavy drinking of their mothers.	5.46	2.02
28.	The harm done by alcoholics is generally over-estimated.	2.92	2.10
29.	Most alcoholics are completely unconcerned about their problem.	3.54	2.17
30.	Alcoholics usually do not have strong feelings of inadequacy.	3.29	2.13

Appendix C (cont'd).

ITEM	MEAN	STANDARD DEVIATION
31. Alcoholism usually comes about very suddenly.	1.85	1.53
32. On any given occasion, an alcoholic is completely powerless to stop drinking once he has started.	4.75	2.10
33. There are very few respectable and productive citizens who have been alcoholics.	2.40	1.99
34. There are no medicines that can reduce the alcoholic's craving for alcohol.	3.75	2.26
35. Most alcoholics behave quite normally when they are not drinking.	5.41	1.97
36. The alcoholic cannot help it when he treats his family badly.	4.85	2.02
37. The alcoholic drinks excessively mainly because he enjoys drinking.	3.04	2.20
38. There is no excuse for anyone becoming addicted to alcohol.	3.78	2.15
39. Alcoholics are usually more tense and nervous than other people.	5.64	1.64
40. One cannot do anything for an alcoholic until he decides he wants to be helped.	6.25	1.52
41. Alcoholics are seldom found in important positions in business.	2.71	2.05
42. A heavy drinker is not an alcoholic if he is able to stop drinking for several weeks at a time.	4.50	2.27
43. A person is not more likely to become an alcoholic if there are other alcoholics in his family.	4.71	2.18
44. There are more alcoholics in Canada today than ever before.	5.93	1.50
45. There is no such thing as an alcoholic being too far gone for him or anyone else to bring about his recovery.	5.33	2.12

Appendix C (cont'd).

ITEM	MEAN	STANDARD DEVIATION
46. The alcoholic has no more real problems than the average person.	4.35	2.45
47. Very few alcoholics are sent to mental hospitals for treatment.	4.96	1.82
48. Will power alone will not enable an alcoholic to stop drinking.	4.65	2.32
49. Alcoholics are often successfully treated by the injection of special drugs into the blood.	3.83	1.56
50. The alcoholic is not helpless to control the amount of alcohol he drinks.	3.15	2.16
51. Alcoholism hardly ever develops because a person has had some terrible personal tragedy.	3.93	2.18
52. Alcoholism is not a type of mental illness.	3.99	2.29
53. Very few alcoholics come from families in which both parents were abstainers.	3.65	2.04
54. Nobody who drinks is immune from alcoholism.	4.67	2.40
55. Most alcoholics have no desire to stop drinking.	3.92	2.26
56. Alcoholics pay little attention to their personal appearance.	4.21	2.06
57. Alcoholics, on the average, have a poorer education than other people.	2.24	1.67
58. A heavy drinker from the upper class or middle class has less chance of becoming an alcoholic than heavy drinker from the lower class.	2.07	1.67
59. Unhappy marriages and other unpleasant family situations often lead to alcoholism.	5.74	1.65
60. A recovered alcoholic never completely loses his craving for alcohol.	4.36	2.26

Appendix C (cont'd).

ITEM	MEAN	STANDARD DEVIATION
61. Alcoholism is best described as an illness rather than a habit.	5.75	2.00
62. Even if an alcoholic has a sincere desire to stop drinking, he cannot do so without help from others.	5.62	1.86
63. A person who often drinks to the point of drunkenness is not necessarily an alcoholic.	5.81	1.72
64. Alcoholics seldom harm anybody but themselves.	3.20	2.22
65. Alcoholics usually have severe emotional difficulties.	5.44	1.66
66. A person can inherit a weakness for alcohol.	3.48	2.24
67. In recent years very little success has been met in treatment of the alcoholic.	2.89	1.95
68. People who attend church regularly are less likely to become alcoholics than those who do not.	4.35	2.26
69. The kind of people who become alcoholics usually keep to themselves and avoid talking about themselves and their problem.	4.44	2.07
70. People who become alcoholics do not necessarily lack will power.	4.83	2.00
71. Many drinkers who are not alcoholics will sometimes take a drink first thing in the morning.	4.10	2.28
72. The average alcoholic is usually unemployed.	2.93	2.01
73. An alcoholic suffers great physical pain if he is deprived of alcohol.	4.69	2.06
74. Most alcoholics do not live on Skid Row.	5.83	1.67
75. Most alcoholics do not have the strength of will to stop drinking.	5.54	1.79
76. Most of the problems that alcoholics have are the direct result of their excessive drinking.	4.80	2.01

Appendix C (cont'd).

ITEM	MEAN	STANDARD DEVIATION
77. Most alcoholics need psychiatric help.	5.63	1.74
78. Alcoholism is a sign of character weakness.	4.18	2.13
79. The seriousness of the alcoholism problem is this country has been exaggerated.	2.46	1.89
80. Most alcoholics are not neurotic.	3.99	1.98
81. The alcoholic generally cares a great deal about what happens to himself and his family.	3.52	2.04
82. There are not enough facilities to take care of the alcoholics who want help.	5.45	1.80
83. Most alcoholics are either drunk or drinking every day.	5.34	1.93
84. A person usually has very little warning before he becomes an alcoholic.	3.81	2.28
85. There is a chemical factor in the body that causes some drinkers to become alcoholics.	3.39	2.10
86. If he wanted to, an alcoholic could have one or two drinks and no more.	2.04	1.77
87. It is possible to get an alcoholic to stop drinking by reasoning with him.	3.04	2.03
88. Once a person becomes an alcoholic, he can never learn to drink moderately again.	5.00	2.28
89. Many people who drink heavily, but only on weekends, are alcoholics.	2.63	1.95
90. The middle class is more sensible about the use of alcohol than either the upper or lower class.	3.63	2.26
91. A doctor cannot get an alcoholic to stop drinking by convincing him that alcohol is damaging his body and ruining his health.	5.25	2.00

Appendix C (cont'd).

ITEM	MEAN	STANDARD DEVIATION
92. It is almost impossible to get an alcoholic to admit that he is an alcoholic.	5.34	1.96
93. The alcoholic rarely, if ever, gets drunk against his own will.	4.17	2.28
94. The alcoholic is basically a spineless person who has found an easy way out of his problems.	3.36	2.16
95. Most alcoholics were brought up in homes in which there was a lot of drinking.	2.46	1.79
96. The alcoholic is not a morally weak person.	4.66	2.08
97. People who belong to clubs and other social organizations are more likely to become alcoholics than those who do not.	2.90	2.00
98. Alcoholics are the only drinkers who get intoxicated on work days.	2.53	2.00
99. Many cases of alcoholism in adults can be traced to emotional experiences in childhood.	3.97	1.97
100. Alcoholics are usually in good physical health.	2.87	1.98

APPENDIX D
ROTATED FACTOR MATRIX

Item Number	Factor Number															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	-.10	-.06	-.05	-.03	-.03	.10	-.12	-.06	-.11	.05	.16	.14	-.22	.18	-.09	.33
2	.04	.15	-.14	.03	-.12	.00	-.05	-.10	-.30	-.14	.04	.36	-.07	-.07	-.02	-.20
3	-.49	-.07	.01	.02	-.03	-.14	.04	-.09	.00	.01	-.06	-.13	.00	.09	-.12	.02
4	.04	.04	-.11	.03	.05	-.23	.42	-.06	.05	-.11	.06	-.03	-.16	.06	-.09	.03
5	.10	.05	-.07	.03	.03	-.28	.10	.01	.01	.04	-.03	-.03	-.11	-.15	-.04	.21
6	-.04	-.15	.01	-.12	-.07	.07	-.03	-.10	.14	.02	.01	-.07	-.09	.00	.18	.40
7	-.07	.30	.06	.13	-.01	.15	-.04	-.01	-.02	.19	.14	-.06	.09	-.01	.03	.02
8	.09	.21	-.07	.36	.07	.03	.00	-.07	.13	-.13	.17	-.12	-.12	-.02	.07	.02
9	-.03	.09	-.13	-.14	-.14	.29	-.22	.06	.03	-.06	.03	-.06	-.07	-.08	.48	.07
10	-.09	.03	-.10	.14	-.11	.29	-.11	.24	-.20	.01	.13	-.06	.13	-.19	-.05	-.15
11	-.22	-.07	-.28	-.01	-.02	-.01	-.13	.04	-.01	.14	-.19	-.20	-.21	.03	.14	.14
12	.04	.49	-.05	.20	.08	.01	.03	-.04	-.20	-.14	.11	.07	.11	-.04	.01	-.12
13	-.21	.00	-.05	.01	-.31	.20	.02	-.24	-.02	-.15	-.03	-.29	-.14	.14	-.09	.04
14	-.01	.21	-.09	.06	.11	.03	.13	-.06	-.09	.11	-.33	.01	.00	-.43	.06	-.14
15	-.2	-.14	.03	.04	.09	.10	-.03	-.14	-.09	.42	.16	-.04	.05	.18	.08	.08
16	-.48	-.09	-.01	-.10	-.08	.28	-.07	-.03	.00	.10	.12	.01	-.12	-.20	.06	-.03
17	.03	.46	-.16	.01	-.06	.09	.08	.08	.10	.07	-.05	.17	.00	-.07	-.16	-.09
18	-.01	.14	-.36	.07	-.03	.05	.01	-.27	-.06	-.06	-.08	.11	-.08	-.02	.20	-.07
19	-.22	-.13	-.14	-.05	-.18	.21	-.22	.09	-.26	.04	-.05	-.29	-.16	-.04	.23	.05
20	.12	.02	-.01	-.04	-.06	-.13	.18	.00	.01	.08	.15	-.04	-.02	.03	-.10	-.04
21	-.06	.35	.15	.03	-.06	.18	.02	-.04	.02	-.04	-.17	.31	-.06	-.10	.18	-.39
22	-.10	-.15	.21	-.06	.09	-.05	.17	.04	.14	-.10	-.15	-.41	-.04	.11	.18	.01
23	.11	.02	-.17	.00	-.22	.03	.08	-.06	.06	-.01	-.03	.32	.06	-.26	.10	.09
24	-.42	.05	.08	-.04	-.08	.03	.05	.22	.05	.08	.06	-.06	.07	.12	.03	-.03
25	-.03	.14	.01	-.03	-.01	.20	.19	-.06	-.01	.47	-.01	-.01	-.02	.01	-.08	.05

APPENDIX D
ROTATED FACTOR MATRIX

Item Number	Factor Number															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
26	.17	.10	-.41	-.02	-.03	-.04	-.14	-.03	-.18	-.02	-.03	.11	-.05	-.08	-.05	.05
27	-.01	-.01	.04	.00	.01	.04	.48	.01	-.03	.14	.00	-.01	.05	-.02	-.05	-.08
28	-.02	.31	-.07	.15	.13	.17	.04	.13	-.03	-.12	.00	.03	-.02	-.35	.12	-.20
29	.06	-.07	-.38	.10	-.25	.14	-.04	.03	-.01	-.07	-.31	-.03	.00	-.28	.18	.17
30	.20	.13	-.06	.13	-.03	-.02	-.01	.06	-.07	.04	-.16	.08	.05	-.20	.48	.03
31	.03	.44	-.07	.10	-.02	.13	-.09	-.15	-.21	.06	-.07	-.10	.03	-.08	.15	.06
32	-.02	-.11	-.05	-.01	.00	.06	.04	.29	-.14	-.08	-.02	.00	-.26	-.02	.00	.17
33	-.05	-.04	-.17	-.04	-.23	.44	.09	.06	-.04	-.06	.05	.04	-.17	-.12	.12	.05
34	.05	.00	-.01	-.05	-.04	-.06	.03	.02	-.45	.01	-.02	.06	.01	.03	.04	.00
35	-.17	-.02	-.17	.10	.21	.11	.08	-.05	-.08	.07	.17	-.09	-.04	-.10	-.07	-.30
36	-.06	-.21	.12	-.07	.11	-.04	.06	-.08	-.19	-.09	-.05	-.10	-.16	.05	.41	.22
37	-.08	.12	-.60	.06	-.06	.12	.15	.07	-.03	-.04	.09	.09	.07	-.10	.01	.02
38	.08	.24	-.24	.05	-.35	.22	.28	.08	-.14	.09	.00	.07	-.09	-.08	-.05	-.07
39	.47	.03	.02	.27	-.11	.11	.04	-.01	.00	-.01	-.13	-.03	.09	.05	.02	.11
40	-.19	-.25	-.01	.15	.03	.02	.02	-.01	.03	.04	.28	.07	-.14	.02	.17	.09
41	-.02	.06	-.07	.09	-.09	.66	.14	-.09	-.04	-.07	-.05	.02	.01	.01	.11	.04
42	.05	.00	-.13	.56	-.12	.15	.06	.11	.01	-.02	-.06	.00	.00	-.14	.01	-.04
43	-.07	-.02	-.05	.16	-.04	.07	.34	.04	-.02	.03	.07	-.22	-.09	-.03	.09	-.08
44	-.08	-.28	.00	-.01	.01	-.11	.04	.27	.03	.06	.20	-.11	-.16	.29	.07	.28
45	-.16	.11	.24	.00	-.04	-.08	.22	-.06	-.10	.14	.13	-.04	-.19	-.15	.04	.05
46	-.13	.04	-.10	.04	-.07	-.06	.28	-.03	-.10	.16	.01	.24	-.35	-.16	.01	.04
47	-.04	.05	.01	.20	-.02	.09	.12	.12	-.08	-.04	.00	-.05	-.35	.01	.15	-.05
48	.09	-.05	.00	-.22	.05	.10	-.08	-.05	-.02	-.29	.16	-.07	-.03	-.07	-.03	.27
49	-.11	.17	.05	.08	.04	.24	.26	.41	.14	-.24	.04	.05	.01	-.02	.05	.11
50	.00	.49	-.01	-.13	.05	.11	.01	-.05	.09	.10	.01	.11	-.05	-.01	-.03	-.12

APPENDIX D
ROTATED FACTOR MATRIX

Item Number	Factor Number															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
51	.21	-.05	.00	-.01	.02	.10	.00	.00	.07	-.02	.00	-.06	-.55	.08	-.04	.11
52	.09	.10	-.06	.21	.04	.11	-.01	.16	-.34	.07	-.13	.28	-.12	.00	.03	.01
53	-.01	.10	.05	.02	-.04	.55	-.07	.06	.17	.06	-.09	.13	-.12	-.07	-.05	.05
54	-.05	-.04	.02	-.09	.02	.00	-.10	.07	-.03	.04	-.04	.04	.00	-.02	.00	.42
55	.00	-.02	-.21	.04	-.21	.09	-.04	-.02	-.03	-.03	-.01	.07	.05	-.53	.02	.12
56	-.14	-.23	-.11	-.07	-.23	.38	.12	.11	-.01	.05	-.26	-.05	-.11	-.14	.12	.07
57	.01	.20	-.16	-.09	-.09	.56	-.05	.05	.07	.10	-.07	.02	.08	-.05	.05	.00
58	-.05	.09	-.14	.07	-.09	.53	.00	-.06	-.01	.17	-.10	-.06	.12	-.07	.08	.08
59	-.56	.01	-.05	.01	-.14	.09	.02	.08	.04	.05	-.10	-.05	.07	-.12	.02	.06
60	-.03	.05	-.23	-.03	.02	.14	-.06	-.26	.08	-.03	-.02	-.04	-.12	.07	.05	.29
61	-.11	-.07	.09	-.01	.17	-.07	.09	-.01	.07	.05	.05	-.63	-.03	.06	-.07	.14
62	-.06	-.18	.01	-.11	.14	.16	.11	.17	-.33	-.17	.01	-.13	-.03	.01	-.06	.38
63	.08	.03	-.04	.54	.07	-.11	.08	-.02	.10	.10	-.10	.05	-.12	-.02	-.11	-.07
64	-.03	.04	.12	.16	-.02	.14	.15	.01	.05	-.16	-.03	.00	-.13	-.44	.07	-.24
65	-.58	.02	.01	-.10	.05	.12	.05	-.02	-.03	-.01	.08	-.03	-.02	-.08	.04	.00
66	-.08	.06	-.22	.18	.03	.11	-.17	-.05	.27	-.23	-.11	.19	.17	.06	.19	.03
67	-.04	.08	-.32	-.10	-.09	.33	-.04	-.19	.03	.04	.06	.16	-.15	-.12	.13	-.06
68	-.05	.05	-.12	-.10	-.02	.37	.03	.09	.08	.22	.11	-.06	-.07	.11	-.09	.05
69	-.22	-.02	.11	.16	-.05	.32	.14	.14	-.09	-.01	.15	-.08	-.07	-.17	.12	.07
70	.00	.00	-.03	.00	.41	-.11	-.03	-.03	.02	.01	.09	-.24	.02	-.10	.02	.22
71	.02	.29	.01	.27	.02	.03	.10	.03	-.02	-.18	.03	.24	.10	-.06	.16	.02
72	-.14	.10	.08	.10	-.01	.54	-.05	.03	-.10	-.07	-.03	-.04	-.01	-.05	-.09	.05
73	-.10	-.04	.06	-.01	-.09	.16	-.20	.41	-.08	-.03	-.08	-.03	-.16	-.01	.08	.09
74	-.06	-.07	-.01	-.17	.16	-.32	.27	.04	.10	.01	.18	.12	.06	-.03	.01	.08
75	-.04	-.18	.09	.13	-.01	.30	.00	.11	-.08	.14	-.03	.17	-.19	-.06	.00	.24

APPENDIX D

ROTATED FACTOR MATRIX

Item Number	Factor Number															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
76	.29	-.12	-.26	.10	-.25	.05	.12	.26	-.19	.04	.00	.12	.03	.00	.04	.18
77	-.08	-.05	.17	.08	-.16	.20	.06	.15	.15	.10	.10	-.20	.03	-.04	.06	.32
78	-.30	.05	-.02	.06	-.56	.18	-.01	.06	.05	.06	-.02	.10	-.09	-.08	-.03	.07
79	.03	.36	-.07	.06	.10	.18	-.09	.06	.01	.03	-.34	-.08	-.15	-.34	.03	-.32
80	.29	-.09	-.03	.15	.17	-.19	.03	.04	-.18	.23	-.13	.19	-.16	-.23	.01	.02
81	-.04	.29	.08	-.20	.40	-.04	.16	-.08	.05	-.07	-.15	.03	.09	.12	.03	.05
82	.00	.13	-.09	.02	.07	-.10	-.09	.10	.08	.01	.24	-.06	.00	.07	.03	.28
83	-.26	-.15	-.09	.30	-.20	.20	-.06	.05	-.02	.00	-.12	.05	.04	-.14	.03	.09
84	-.13	.11	-.06	.07	.15	.19	.07	.02	.00	-.04	-.19	-.01	-.07	.00	.19	.42
85	.01	-.10	-.39	-.03	.26	.17	.09	-.14	.17	.02	.03	-.02	-.07	.00	.00	.05
86	-.04	.40	-.22	-.10	-.11	.07	-.06	.07	.09	.04	-.19	.25	-.05	-.04	.21	-.28
87	-.06	.24	.09	.05	-.09	.01	.06	.05	.12	.31	.03	-.02	.02	-.20	.06	.03
88	.17	-.25	-.05	.02	.08	.00	.16	-.06	-.15	.07	.02	-.17	-.03	.08	-.03	.52
89	.04	-.02	-.17	-.56	.07	.03	.03	.06	.07	-.05	-.10	-.04	-.02	.00	.03	.12
90	-.12	.23	.02	.12	-.15	.28	-.14	.11	.20	.23	-.01	-.09	-.04	.14	-.09	-.09
91	.11	-.14	-.02	.05	.19	.04	-.13	-.10	-.13	-.20	.17	.08	-.23	-.04	.13	.17
92	-.14	-.10	-.13	.04	-.07	-.03	-.06	.01	.10	-.06	.06	-.07	-.30	-.13	-.01	.32
93	-.11	-.06	-.09	.07	.01	.21	.05	-.16	.13	.05	.06	.16	-.04	-.32	-.15	.01
94	-.28	-.01	-.11	.10	-.45	.39	.02	-.03	-.07	-.06	-.10	.19	.04	.01	.03	-.10
95	-.09	.11	-.16	-.11	-.08	.46	-.36	.08	.18	-.01	.00	.23	-.02	-.02	-.01	-.08
96	.03	.01	-.03	.01	.58	-.21	.05	.04	.00	.00	-.10	-.02	-.08	.01	-.08	.00
97	-.08	-.04	-.27	-.07	-.02	.12	.01	.03	.08	.27	.05	.14	.04	-.06	.37	-.07
98	-.11	.00	-.16	.15	.02	.29	-.14	.11	-.02	.16	-.12	.16	.14	.08	.11	-.05
99	-.47	.00	-.01	-.09	.21	.15	-.20	.07	.14	-.08	-.08	.12	-.05	.11	-.10	-.01
100	-.04	.18	.02	-.08	.09	-.13	-.13	.16	.01	.00	.03	.11	.06	-.40	.16	.02

APPENDIX E

ITEMS WITH HIGHEST LOADINGS ON EACH FACTOR

In this appendix, the items with the highest loadings on each factor are grouped together for the convenience of the reader in studying the factor structure. It includes those items which have a factor loading equal to or greater than .20 on each factor - except for Factor 6 which includes only those items with factor loadings greater than .27.

FACTOR 1

ITEM	FACTOR LOADING
<hr/>	
65. Alcoholics usually have severe emotional difficulties.	- .58
59. Unhappy marriages and other unpleasant family situations often lead to alcoholism.	- .56
3. An alcoholic's basic troubles were with him long before he had a problem with alcohol.	- .49
16. An alcoholic usually has something in his past which is driving him to drink.	- .48
99. Many cases of alcoholism in adults can be traced to emotional experiences in childhood.	- .47
39. Alcoholics are usually more tense and nervous than other people.	- .47
24. Alcoholism is more likely to occur in people who worry a lot about their everyday problems.	- .42
78. Alcoholism is a sign of character weakness.	- .30 (5)
76. Most of the problems that alcoholics have are the direct result of their excessive drinking.	.29
80. Most alcoholics are not neurotic.	.29
94. The alcoholic is basically a spineless person who has found an easy way out of his problems.	- .28 (5)
83. Most alcoholics are either drunk or drinking every day.	- .26 (4)
69. The kind of people who become alcoholics usually keep to themselves and avoid talking about themselves and their problems.	- .22 (6)
19. Most alcoholics keep their families in continual want.	- .22 (12)
11. Most alcoholics do not realize that something is wrong with them.	- .22 (3)
51. Alcoholism hardly ever develops because a person has had some terrible personal tragedy.	.21 (13)
13. Alcoholics are generally very unhappy people.	- .21 (5)
30. Alcoholics usually do not have strong feelings of inadequacy.	.20 (15)

FACTOR 2

ITEM	FACTOR LOADING
12. Preferring to drink alone rather than with friends is not a sign of alcoholism.	.49
50. The alcoholic is not helpless to control the amount of alcohol he drinks.	.49
17. Most alcoholics could drink less if they wanted to.	.46
31. Alcoholism usually comes about very suddenly.	.44
86. If he wanted to, an alcoholic could have one or two drinks and no more.	.40
79. The seriousness of the alcoholism problem in this country has been exaggerated.	.36
21. With proper treatment, an alcoholic can learn to take the occasional social drink without getting into trouble.	.35 (16)
7. A drinking problem can often be avoided by changing one's job.	.30
71. Many drinkers who are not alcoholics will sometimes take a drink first thing in the morning.	.29
28. The harm done by alcoholics is generally over-estimated.	.31 (14)
81. The alcoholic generally cares a great deal about what happens to himself and his family.	.29 (5)
44. There are more alcoholics in Canada today than ever before.	-.28 (14)
40. One cannot do anything for an alcoholic until he decides he wants to be helped.	-.25 (11)
88. Once a person becomes an alcoholic, he can never learn to drink moderately again.	-.25 (16)
87. It is possible to get an alcoholic to stop drinking by reasoning with him.	.24 (10)
38. There is no excuse for anyone becoming addicted to alcohol.	.24 (5)
90. The middle class is more sensible about the use of alcohol than either the upper or lower class.	.23 (6)
56. Alcoholics pay little attention to their personal appearance.	-.23 (6)
36. The alcoholic cannot help it when he treats his family badly.	-.21 (15)
14. Alcoholism is a relatively minor social problem.	.21 (14)
8. A person who frequently stays intoxicated for several days at a time is not necessarily an alcoholic.	.21 (4)

FACTOR 3

ITEM	FACTOR LOADING
37. The alcoholic drinks excessively mainly because he enjoys drinking.	-.60
26. The alcoholic is seldom helped by any sort of medical or psychological treatment.	-.41
85. There is a chemical factor in the body that causes some drinkers to become alcoholics.	-.39
29. Most alcoholics are completely unconcerned about their problem.	-.38
18. Most alcoholics could not be rehabilitated even if more help were available for them.	-.36
67. In recent years very little success has been met in treatment of the alcoholic.	-.32 (6)
11. Most alcoholics do not realize that something is wrong with them.	-.28
97. People who belong to clubs and other social organizations are more likely to become alcoholics than those who do not.	-.28 (15)
76. Most of the problems that alcoholics have are the direct results of their excessive drinking.	-.26 (1)
45. There is no such thing as an alcoholic being too far gone for him or anyone else to bring about his recovery.	.24
38. There is no excuse for anyone becoming addicted to alcohol.	-.24 (5)
60. A recovered alcoholic never completely loses his craving for alcohol.	-.23 (16)
86. If he wanted to, an alcoholic could have one or two drinks and no more.	-.23 (2)
66. A person can inherit a weakness for alcohol.	-.22 (9)
22. The alcoholic deserves the same consideration as any other sick person.	.21 (12)
55. Most alcoholics have no desire to stop drinking.	-.21 (14)

FACTOR 4

ITEM	FACTOR LOADING
42. A heavy drinker is not an alcoholic if he is able to stop drinking for several weeks at a time.	.57
89. Many people who drink heavily, but only on weekends are alcoholics.	-.56
63. A person who often drinks to the point of drunkenness is not necessarily an alcoholic.	.54
8. A person who frequently stays intoxicated for several days at a time is not necessarily an alcoholic.	.36
83. Most alcoholics are either drunk or drinking every day.	.30
39. Alcoholics are usually more tense and nervous than other people.	.27 (1)
71. Many drinkers who are not alcoholics will sometimes take a drink first thing in the morning.	.27 (2)
48. Will power alone will not enable an alcoholic to stop drinking.	-.22 (10)
52. Alcoholism is not a type of mental illness.	-.21 (9)
47. Very few alcoholics are sent to mental hospitals; for treatment.	.20 (13)

FACTOR 5

ITEM	FACTOR LOADING
<hr/>	
96. The alcoholic is not a morally weak person.	.58
78. Alcoholism is a sign of character weakness.	-.54
94. The alcoholic is basically a spineless person who has found an easy way out of his problems.	-.45
70. People who become alcoholics do not necessarily lack will power.	.41
81. The alcoholic generally cares a great deal about what happens to himself and his family.	.40
38. There is no excuse for anyone becoming addicted to alcohol.	-.35
13. Alcoholics generally are very unhappy people.	-.31
85. There is a chemical factor in the body that causes some drinkers to become alcoholics.	.26 (3)
29. Most alcoholics are completely unconcerned about their problem.	-.25 (3)
76. Most of the problems that alcoholics have are the direct result of their excessive drinking.	-.25 (1)
33. There are very few respectable and productive citizens who have been alcoholics.	-.23 (6)
56. Alcoholics pay little attention to their personal appearance.	-.23 (6)
23. The alcoholic has only himself to blame for his problem.	-.22 (12)
55. Most alcoholics have no desire to stop drinking.	-.22 (14)
35. Most alcoholics behave quite normally when they are not drinking.	.21 (16)
99. Many cases of alcoholism in adults can be traced to emotional experiences in childhood.	.21 (1)

FACTOR 6

ITEM	FACTOR LOADING
41. Alcoholics are seldom found in important positions in business.	.66
57. Alcoholics, on the average, have a poorer education than other people.	.56
53. Very few alcoholics come from families in which both parents were abstainers.	.55
72. The average alcoholic is usually unemployed.	.54
58. A heavy drinker from the upper class or middle class has less chance of becoming an alcoholic than a heavy drinker from the lower class.	.53
95. Most alcoholics were brought up in homes in which there was a lot of drinking.	.46
33. There are very few respectable and productive citizens who have been alcoholics.	.44
94. The alcoholic is basically a spineless person who has found an easy way out of his problems.	.39 (5)
56. Alcoholics pay little attention to their personal appearance.	.38
68. People who attend church regularly are less likely to become alcoholics than those who do not.	.37
67. In recent years very little success has been met in treatment of the alcoholic.	.33
69. The kind of people who become alcoholics usually keep to themselves and avoid talking about themselves and their problems.	.32
74. Most alcoholics do not live on Skid Row.	-.32
75. Most alcoholics do not have the strength of will to stop drinking.	.30
98. Alcoholics are the only drinkers who get intoxicated on work days.	.29
9. The alcoholic has a poison in his system which produces the craving for alcohol.	.29 (15)
10. The most sensible way to deal with alcoholics is to compel them to go somewhere for treatment.	.29
16. An alcoholic usually has something in his past which is driving him to drink.	.28 (1)
90. The middle class is more sensible about the use of alcohol than either the upper or lower class.	.28
5. There is no more alcoholism in the slum districts than anywhere else.	-.28

FACTOR 7

ITEM	FACTOR LOADING
27. Children are never born with an alcoholic constitution because of the heavy drinking of their mother.	.48
4. Many alcoholics never get into trouble with the police.	.42
95. Most alcoholics were brought up in homes in which there was a lot of drinking.	-.36 (6)
43. A person is not more likely to become an alcoholic if there are other alcoholics in his family.	.34
38. There is no excuse for anyone becoming addicted to alcohol.	.28 (5)
46. The alcoholic has no more real problems than the average person.	.28 (13)
74. Most alcoholics do not live on Skid Row.	.27 (6)
49. Alcoholics are often successfully treated by the injection of special drugs into the blood.	.26 (8)
9. The alcoholic has a poison in his system which produces the craving for alcohol.	-.22 (15)
45. There is no such thing as an alcoholic being too far gone for him or anyone else to bring about his recovery.	.22 (3)
19. Most alcoholics keep their families in continual want.	-.22 (12)
73. An alcoholic suffers great physical pain if he is deprived of alcohol.	-.20 (8)

FACTOR 8

ITEM	FACTOR LOADING
73. An alcoholic suffers great physical pain if he is deprived of alcohol.	.41
49. Alcoholics are often successfully treated by the injection of special drugs into the blood.	.41
32. On any given occasion, an alcoholic is completely powerless to stop drinking once he has started.	.29
18. Most alcoholics could not be rehabilitated even if more help were available for them.	-.27 (3)
44. There are more alcoholics in Canada today than ever before.	.27 (14)
76. Most of the problems that alcoholics have are the direct result of their excessive drinking.	.26 (1)
60. A recovered alcoholic never completely loses his craving for alcohol.	-.26 (16)
10. The most sensible way to deal with alcoholics is to compel them to go somewhere for treatment.	.24 (6)
13. Alcoholics generally are very unhappy people.	-.24 (5)
24. Alcoholism is more likely to occur in people who worry a lot about their everyday problems.	.22 (1)

FACTOR 9

ITEM	FACTOR LOADING
34. There are no medicines that can reduce the alcoholic's craving for alcohol.	-.45
52. Alcoholism is not a type of mental illness.	-.34
62. Even if an alcoholic has a sincere desire to stop drinking, he cannot do so without help from others.	-.33 (16)
2. Alcoholism is not a disease.	-.30 (12)
66. A person can inherit a weakness for alcohol.	.27
19. Most alcoholics keep their families in continual want.	-.26 (12)
31. Alcoholism usually comes about very suddenly.	-.21 (2)
12. Preferring to drink alone rather than with friends is not a sign of alcoholism.	-.20 (2)

FACTOR 10

ITEM	FACTOR LOADING
25. Books on "positive thinking" have helped many alcoholics to overcome their problems.	.47
15. Spiritual guidance will often help an alcoholic to stop drinking.	.42
87. It is possible to get an alcoholic to stop drinking by reasoning with him.	.31
48. Will power alone will not enable an alcoholic to stop drinking.	-.29
97. People who belong to clubs and other social organizations are more likely to become alcoholics than those who do not.	.27 (15)
49. Alcoholics are often successfully treated by the injection of special drugs into the blood.	-.24 (8)
90. The middle class is more sensible about the use of alcohol than either the upper or lower class.	.24 (6)
80. Most alcoholics are not neurotic.	.23 (1)
66. A person can inherit a weakness for alcohol.	-.23 (9)
68. People who attend church regularly are less likely to become alcoholics than those who do not.	.22 (6)

FACTOR 11

ITEM	FACTOR LOADING
20. Alcoholism is not brought on as a punishment for sins.	.50
79. The seriousness of the alcoholism problem in this country has been exaggerated.	-.34 (2)
14. Alcoholism is a relatively minor social problem.	-.33 (14)
29. Most alcoholics are completely unconcerned about their problem.	-.30 (3)
40. One cannot do anything for an alcoholic until he decides he wants to be helped.	.28
56. Alcoholics pay little attention to their personal appearance.	-.26 (6)
82. There are not enough facilities to take care of the alcoholics who want help.	.25 (16)

FACTOR 12

ITEM	FACTOR LOADING
61. Alcoholism is best described as an illness rather than a habit.	-.63
22. The alcoholic deserves the same consideration as any other sick person.	-.41
2. Alcoholism is not a disease.	.36
23. The alcoholic has only himself to blame for his problems.	.32
21. With proper treatment, an alcoholic can learn to take the occasional social drink without getting into trouble.	.31 (16)
13. Alcoholics generally are very unhappy people.	-.29 (5)
19. Most alcoholics keep their families in continual want.	-.29
52. Alcoholism is not a type of mental illness.	.28 (9)
86. If he wanted to, an alcoholic could have one or two drinks and no more.	.25 (2)
70. People who become alcoholics do not necessarily lack will power.	-.24 (5)
46. The alcoholic has no more real problems than the average person.	.24 (13)
71. Many drinkers who are not alcoholics will sometimes take a drink first thing in the morning.	.24 (2)
95. Most alcoholics were brought up in homes in which there was a lot of drinking.	.23 (6)
43. A person is not more likely to become an alcoholic if there are other alcoholics in his family.	-.22 (7)

FACTOR 13

ITEM	FACTOR LOADING
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51. Alcoholism hardly ever develops because a person has had some terrible personal tragedy.	-.55
46. The alcoholic has no more real problems than the average person.	-.35
47. Very few alcoholics are sent to mental hospitals for treatment.	-.35
92. It is almost impossible to get an alcoholic to admit that he is an alcoholic.	-.30 (16)
32. On any given occasion, an alcoholic is completely powerless to stop drinking once he has started.	-.26 (8)
91. A doctor cannot get an alcoholic to stop drinking by convincing him that alcohol is damaging his body and ruining his health.	-.23
1. An alcoholic may stop drinking for a while, but he usually goes back to it again.	-.22 (16)
11. Most alcoholics do not realize that something is wrong with them.	-.21 (3)

FACTOR 14

ITEM	FACTOR LOADING
55. Most alcoholics have no desire to stop drinking.	-.53
64. Alcoholics seldom harm anybody but themselves.	-.44
14. Alcoholism is a relatively minor social problem.	-.43
100. Alcoholics are usually in good physical health.	-.40
28. The harm done by alcoholics is generally over-estimated.	-.35
79. The seriousness of the alcoholism problem in this country has been exaggerated.	-.34 (2)
93. The alcoholic rarely, if ever, gets drunk against his own will.	-.32
44. There are more alcoholics in Canada today than ever before.	.29
29. Most alcoholics are completely unconcerned about their problem.	-.28 (3)
23. The alcoholic has only himself to blame for his problems.	-.26 (12)
80. Most alcoholics are not neurotic.	-.23 (1)
16. An alcoholic usually has something in his past which is driving him to drink.	-.20 (1)

FACTOR 15

ITEM	FACTOR LOADING
30. Alcoholics usually do not have strong feelings of inadequacy.	.48
9. The alcoholic has a poison in his system which produces the craving for alcohol.	.47
36. The alcoholic cannot help it when he treats his family badly.	.41
97. People who belong to clubs and other social organizations are more likely to become alcoholics than those who do not.	.37
19. Most alcoholics keep their families in continual want.	.23 (12)
86. If he wanted to, an alcoholic could have one or two drinks and no more.	.21 (2)

FACTOR 16

ITEM	FACTOR LOADING
88. Once a person becomes an alcoholic, he can never learn to drink moderately again.	.52
54. Nobody who drinks is immune from alcoholism.	.42
84. A person usually has very little warning before he becomes an alcoholic.	.42
6. An alcoholic can get into as much trouble by drinking beer as by drinking liquor.	.40
21. With proper treatment, an alcoholic can learn to take the occasional social drink without getting into trouble.	-.39
62. Even if an alcoholic has a sincere desire to stop drinking, he cannot do so without help from others.	.38
1. An alcoholic may stop drinking for a while, but he usually goes back to it again.	.33
92. It is almost impossible to get an alcoholic to admit that he is an alcoholic.	.32
79. The seriousness of the alcoholism problem in this country has been exaggerated.	-.32 (2)
77. Most alcoholics need psychiatric help.	.32
35. Most alcoholics behave quite normally when they are not drinking.	-.30
60. A recovered alcoholic never completely loses his craving for alcohol.	.29
44. There are more alcoholics in Canada today than ever before.	.28 (14)
86. If he wanted to, an alcoholic could have one or two drinks and no more.	-.28 (2)
82. There are not enough facilities to take care of the alcoholics who want help.	.28
48. Will power alone will not enable an alcoholic to stop drinking.	.27 (10)
64. Alcoholics seldom harm anybody but themselves.	-.24 (14)
75. Most alcoholics do not have the strength of will to stop drinking.	.24 (6)
36. The alcoholic cannot help it when he treats his family badly.	.22 (15)
70. People who become alcoholics do not necessarily lack will power.	.22 (5)
5. There is no more alcoholism in the slum districts than anywhere else.	.21 (6)
2. Alcoholism is not a disease.	-.20 (12)
28. The harm done by alcoholics is generally overestimated.	-.20 (14)

APPENDIX F

SECOND-ORDER PARTIAL CORRELATIONS OF FACTORS WITH THREE DEMOGRAPHIC VARIABLES

Factor	Age	Sex	Education
Emotional difficulties (1)	-.29**	.14*	.08
Loss of control (2)	.03	-.08	-.14*
Prognosis for recovery (3)	.22**	-.10	-.25**
Alcoholic as steady drinker (4)	.11	.01	.02
Alcoholism and character defect (5)	-.06	.00	-.03
Social status of alcoholic (6)	-.03	-.05	-.24**
Alcoholism as an illness (12)	.03	.07	.20**
Harmless voluntary indulgence (14)	.02	.02	-.22**
Addiction liability (16)	.11	-.01	.00

* Significant at the .05 level.

** Significant at the .01 level.



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The structure of popular
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